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Budget

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SMITHSONIAN INSTITUTION

Budget Justifications for Fiscal Year 1978



Submitted to the Committees on Appropriations

Congress of the United States

January 1977

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Ron Kozal

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SCIENCE

3100 ✓

Assistant Secretary - Science

Natl Anthropological Film Center

Research Inst. on Immigration & Ethnic Studies

David Challinor

Richard Sorenson

Roy Bryce-Laporte

SI 114

L'Enfant 3210

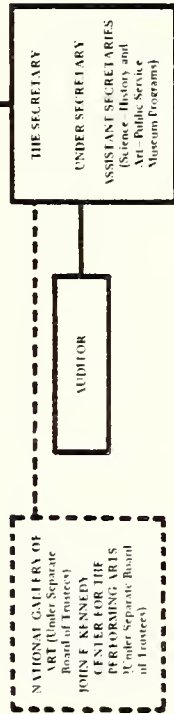
L'Enfant 2300

Harold Michaelson

SI 14

SMITHSONIAN INSTITUTION

BOARD OF REGENTS



NATIONAL GALLERY OF ART (Under Separate Board of Trustees)
JOHN F. KENNEDY CENTER FOR THE PERFORMING ARTS (Under Separate Board of Trustees)

SMITHSONIAN RESEARCH FOUNDATION

BOARDS AND COMMISSIONS

Advisory Board of the Cooper-Hewitt Museum of Decorative Arts and Design
Advisory Council for the National Museum Act
Archives of American Art Board of Trustees
Freer Viewing Committee
Hirshhorn Museum and Sculpture Garden Board of Trustees
National Air and Space Museum Advisory Board
National Armed Forces Museum Advisory Board
National Board of the Smithsonian Associates
National Collection of Fine Arts Commission
National Portrait Gallery Commission
Smithsonian Foreign Centers Program
Smithsonian Councils
Smithsonian Science Information Exchange Board of Directors

BUREAUS AND ACTIVITIES

WOODROW WILSON INTERNATIONAL CENTER FOR SCHOLARS (Under Separate Board of Trustees)	FINANCIAL SERVICES	SCIENCE	HISTORY AND ART	PUBLIC SERVICE	MUSEUM PROGRAMS	SUPPORT ACTIVITIES
	Accounting Business Management Belmont Conference Center Product Development Program Smithsonian Museum Shops Grants and Insurance Administration Investments Accounting Division Programming and Budget	Center for the Study of Man Chesapeake Bay Center for Environmental Studies Fort Pierce Bureau National Air and Space Museum National Museum of Natural History Smithsonian Oceanographic Sorting Center National Zoological Park Office of International Programs Radiation Biology Laboratory Smithsonian Astrophysical Observatories Smithsonian Science Information Exchange, Inc. Smithsonian Tropical Research Institute	Archives of American Art Cooper-Hewitt Museum of Decorative Arts and Design Freer Galleries of Art Hirshhorn Museum and Sculpture Garden Joseph Henry Papers National Collection of Fine Arts Renwick Gallery National Museum of History and Technology National Portrait Gallery Office of Academic Studies Office of American Studies	Antacosta Neighborhood Museum Division of Performing Arts Office of Elementary and Secondary Education Office of Public Affairs and Seminars Smithsonian Resident Associates Smithsonian Institution Press Smithsonian Magazine Visitor Information and Associates Reception Center	Conservation Analytical Laboratory National Museum Act Program Office of Exhibits Central Office of Museum Programs Office of the Registrar Smithsonian Archives Smithsonian Institution Libraries Smithsonian Institution Traveling Exhibition Service	Computer Services Contracts Equal Opportunities Facilities Planning and Engineering Services International Exchange Service Management Analysis Personnel Administration Plant Services Printing and Photographic Services Protection Services Supply Services Travel Services

Approved February 2, 1976

S. Dillon Ripley
Secretary

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SCIENCE

1	3100	✓ Assistant Secretary - Science	1	David Challinor	SI 114	2	Harold Michaelson	SI 142
2		Natl Anthropological Film Center	1	Richard Sorenson	L'Enfant 3210			
3		Research Inst. on Immigration & Ethnic Studies	1	Roy Bryce-Laporte	L'Enfant 2300			
4	3200	Ofc of International Programs	1	Kennedy Schmertz	L'Enfant 3300			
5	3300	Natl Museum of Natural History	2	Porter Kier	NHB 417	1	John Townsend	NHB 106
6	3400	Sm. Tropical Research Institute	1	Ira Rubinoff	AIR MAIL		Rene Gomez-Valladares	
7	3500	Natl Zoological Park	2	Theodore Reed		2	Joe Reed/Ed Kohn	
8	3600	Radiation Biology Laboratory	1	William Klein	MAIL		Carolyn Walker/ Joe Fisher	
9	3700	Center for the Study of Man		Porter Kier	NHB 421	1	Sherrill Berger	
10	3800	Natl Air and Space Museum	2	Michael Collins	NASM 3506		Jack Whitelaw	
11	3C00	Sm. Research Awards Program		Harold Michaelson	SI 142		Rita Jordan	
12	3E00	Chesapeake Bay Center	1	Kevin Sullivan	MAIL	1	Don Wilhelm	
13	4000	Sm. Astrophysical Observatory	1	George Field	MAIL	2	John Gregory/Robert Ayers	
14	1C00	Internat'l Environmental Sci Program		Harold Michaelson	SI 142			
15		Subtotal Science						

17		HISTORY & ART						
18	5100	✓ Assistant Secretary - History & Art	1	Charles Blitzer	SI 302	1	Dean Anderson	
19	1900	Ofc of Academic Studies	1	Edward Davidson	SI 457	1	Gretchen Goble	
20	S200	Natl Portrait Gallery	1	Marvin Sadik	FAPG 200	1	Douglas Evelyn	
21	S300	Natl Collection of Fine Arts	1	Joshua Taylor	FAPG 242			
22	S400	Freer Gallery of Art	1	Harold Stern	Freer		Willa Moore	
23	SS00	✓ Natl Museum of History & Technology	4	Brooke Hindle	HTE 5112	call to handwritten pick up	Robert Tillotson	
24	S600	Hirshhorn Museum & Sculpture Garden	4	Abram Lerner	HMSG 401	1	Joseph Sefekar	HMSG 403
25	S800	Cooper-Hewitt Museum	1	Lisa Taylor	MAIL		John Dobkin	
26	S900	Joseph Henry Papers	1	Nathan Reingold	SI 133			
27	SB00	Archives of American Art	1	William Woolfenden	MAIL (CC: R. Nicastro, FAPG 331)	(Balcony)		
28	SC00	Ofc of American Studies	1	Wilcomb Washburn	FAPG 309			
29	SC50	Folklife Unit	1	Ralph Rinzler	L'Enfant 2100			
30	SG00	Building Manager, FAPG	1	Robert Dean	FAPG 108			
31	1D00	Bicentennial of American Revolution	1	Susan Hamilton	SI 231			
32		Subtotal History & Art						

PUBLIC SERVICE

35	6100	✓ Assistant Secretary - Public Service	1	Julian Euell	SI 105	1	Jackie Dulaney/Vince MacDon	
36	SE00	Ofc of Sm. Symposia & Seminars	1	Wilton Dillon	SI 507		Dolly Richardson	
37	6200	✓ Ofc of Public Service	1	Carl Larsen	A&I 2412		Muriel Slaughter	
38	6250	Special Events	1	Jeanette Gladstone	A&I 2436			
39	6260	Telecommunications	1	Nazaret Cherkezian	A&I 2410			
40	6400	Division of Performing Arts	1	James Morris	L'Enfant 2100		Richard Lusher	
41	6900	Anacostia Neighborhood Museum	1	John Kinard	MAIL	1	Audrey Archer	
42	6C00	Smithsonian Institution Press	1	Edward Rivinus	A&I 2281			
43	6E00	Ofc of Elementary & Secondary Education	1	David Estabrook	A&I 1163			
44		Subtotal, Public Service						

Sm Science Information Exchange
Consultant to Secy Ofc. of Secy.1 David Hwey MAIL
1 James Bradley



MUSEUM PROGRAMS

1	7000	✓ Assistant Secretary - Museum Programs	/ Paul Perrot	A&I 2467	/ Wm Richards
2	7100	Office of Museum Programs	Paul Perrot	A&I 2467	
3	1700	Smithsonian Archives	/ Richard Lytle	A&I 2135	
4	1E00	Major Exhibition Program	Paul Perrot	A&I 2467	
5	6D00	Smithsonian Institution Libraries	/ Russell Shank	NHB 24	
6	7200	Ofc of Exhibits Central	/ James Mahoney	A&I 2282	Wm. Clark SVC CTR 3F11
7	7300	Ofc of Registrar	/ Phillip Leslie	A&I 2163	
8	7400	Buildings Mgr--South Group	/ James Dodd	A&I 1406	
9	7500	Conservation-Analytical Laboratory	/ Robert Organ	HTB AB070	
10	7600	National Museum Act	Paul Perrot	A&I 2467	
11	7700	Sm. Traveling Exhibition Service	/ Dennis Gould	Barney House	Antonio Diaz
12	7800	Horticultural Services	/ James Buckler	A&I 2401	
13		Subtotal Museum Programs			

SUPPORT ACTIVITIES

16	2E00	✓ Director of Support Activities	/ Richard Ault	SI 119	/ Michael League
17	1400	Ofc of Equal Opportunity	/ Archie Grimmett	A&I 3161	
18	2400	Ofc of Personnel Administration	/ Howard Toy	A&I 1471	
19	2500	Management Analysis Office	/ Ann Campbell	A&I 3301	L'Enfant 1702200
20	2600	Travel Services Office	/ Betty Strickler	A&I 1234	
21	2700	Ofc of Supply Services	/ Mary Barton	L'Enfant 3120	
22	2800	Ofc of Printing & Photographic Svcs	/ Arthur Gauth	HTB CR054	
23	2C00	Ofc of Protection Services	/ Robert Burke	A&I 2479	Robert Seabolt/Cliff Books
24	2E00	Ofc of Facilities Planning & Engrg Services	2 Philip Reiss	L'Enfant 3230	
25	2F00	Ofc of Plant Services	/ Kenneth Shaw	NHB 79M	/ Leo Flanagan
26	3A00	Ofc of Computer Services	/ Stanley Kovy	A&I 2363	
27	6A00	International Exchange Service	/ J.E. Estes	Service Center	
28	2X00	Rental Property Account	/ Kenneth Shaw	A&I 79M	
29		Subtotal Support Activities			
30		Coordinator for Public Info	/ Lawrence Taylor	SI 2112	

ADMINISTRATION

32	1100	✓ Office of Secretary	2 Dorothy Rosenberg/James Hobbins	SI 213	
33	1200	Secretary Files	/ Betty Henderson	SI 3DS	
34	1300	Special Assistant to Secretary	/ James Goode	SI B-4	
35	1600	Secretary's Laboratory	D. Rosenberg/J. Hobbins	SI 213	
36	1A00	✓ Ofc of the Treasurer	/ T. Ames Wheeler		/ Chris Hohenlohe
37	2100	✓ Assistant Secretary for Administration	/ John Jameson	SI 218	
38	2200	Ofc of Audits	/ Chris Perntino	L'Enfant 2400	
39	2300	Ofc of the General Counsel	2 Peter Powers	SI 408; Margaret Baugman	16
40	1B00	Reserve			
41		Subtotal Administration			SI 221

Treasurer's Office

44	1A10	Immediate Office	T. Ames Wheeler	SI 314	
45	1A20	Ofc of Programming & Budget	Jon Yellin	SI 107	
	1A30	Accounting Division	2 AL Goff	L'Enfant 3470	
	1A50	Investment Accounting	/ Ernie Berger	L'Enfant 3470	
		Agenda Office	/ Mike Young	AC+I 1465	
		Membership Development	/ Symington	SI 221	

SMITHSONIAN INSTITUTION

FISCAL YEAR 1978 ESTIMATES OF APPROPRIATIONS

TABLE OF CONTENTS

	<u>Page</u>
ORGANIZATION OF THE SMITHSONIAN INSTITUTION	
GENERAL STATEMENT.....	i
SALARIES AND EXPENSES.....	Tab A
Summary Tables.....	A-1
Uncontrollable Increases.....	A-4
<u>Science</u>	
Office of the Assistant Secretary.....	A-6
National Museum of Natural History.....	A-7
Smithsonian Astrophysical Observatory.....	A-10
Smithsonian Tropical Research Institute.....	A-15
Radiation Biology Laboratory.....	A-17
Office of International Programs.....	A-19
Chesapeake Bay Center for Environmental Studies.....	A-20
National Air and Space Museum.....	A-22
National Zoological Park.....	A-24
Center for the Study of Man.....	A-27
<u>History and Art</u>	
Office of the Assistant Secretary.....	A-30
National Museum of History and Technology.....	A-31
National Collection of Fine Arts.....	A-33
National Portrait Gallery.....	A-37
Hirshhorn Museum and Sculpture Garden.....	A-39
Freer Gallery of Art.....	A-42
Archives of American Art.....	A-44
Cooper-Hewitt Museum of Decorative Arts and Design.....	A-46
<u>Public Service</u>	
Office of the Assistant Secretary.....	A-47
Anacostia Neighborhood Museum.....	A-48
International Exchange Service.....	A-50
Division of Performing Arts.....	A-51
Office of Public Affairs.....	A-53
Smithsonian Institution Press.....	A-55
<u>Museum Programs</u>	
Office of the Assistant Secretary.....	A-56
Office of the Registrar.....	A-60
Conservation-Analytical Laboratory.....	A-61
Smithsonian Institution Libraries.....	A-62
Office of Exhibits Central.....	A-64
Smithsonian Institution Traveling Exhibition Service.....	A-65
Smithsonian Archives.....	A-69
National Museum Act.....	A-71

Special Programs

Introduction.....	A-73
American Revolution Bicentennial Program.....	A-74
American and Folklife Studies.....	A-75
International Environmental Science Program.....	A-77
Academic and Educational Programs.....	A-79
Smithsonian Research Awards Program.....	A-82

<u>Administration.....</u>	A-84
----------------------------	------

Support Activities

Office of Printing and Photographic Services.....	A-89
Office of Protection Services.....	A-90
Office of Plant Services.....	A-93

SCIENCE INFORMATION EXCHANGE.....	Tab B
-----------------------------------	-------

MUSEUM PROGRAMS AND RELATED RESEARCH (SPECIAL FOREIGN CURRENCY PROGRAM).....	Tab C
---	-------

FACILITIES PLANNING, RENOVATION, RESTORATION, AND CONSTRUCTION.....	Tab D
--	-------

Summary.....	D-1
--------------	-----

Construction and Improvements, National Zoological Park.....	D-2
--	-----

Restoration and Renovation of Buildings.....	D-6
--	-----

Construction: Museum Support Center Planning.....	D-11
---	------

APPENDIX.....	Tab E
---------------	-------

Appropriation by Object Class, Salaries and Expenses.....	E-1
Visitors to Smithsonian Buildings, FY 1961-Transition Quarter.....	E-2
Treasurer's Report - FY 1976.....	E-3

SMITHSONIAN INSTITUTION

FISCAL YEAR 1978 ESTIMATES OF APPROPRIATIONS

GENERAL STATEMENT

Organization and Performance

Founded in 1846, the Smithsonian Institution is an independent establishment devoted to public education, research, and national service in the arts, sciences, and history. Centered on the Mall in Washington, D.C., it also operates major facilities and activities elsewhere in Washington, across the country, and overseas. It is one of the world's leading research centers and encompasses the world's largest museum complex, attracting approximately 20 million visits annually to its museums, galleries, and zoological park. Additional millions also view Smithsonian traveling exhibitions, which appear across the United States and abroad, and its annual Folklife Festival. As custodian of the National Collections, it possesses more than 70 million art objects, natural history specimens, and artifacts. These collections are displayed for the enjoyment and education of visitors and are available for research by the staff of the Institution and by hundreds of visiting students, scientists, and historians each year. Other significant study efforts draw their data and results directly from terrestrial, marine, and astrophysical observations at various Smithsonian installations.

The Smithsonian complex consists of 10 exhibition buildings in Washington, D.C. and New York City in the fields of science, history, technology, and art; a zoological park and an animal conservation and research center near Front Royal, Virginia; the Anacostia Neighborhood Museum, which performs research and exhibit activities and conducts an exhibits production training program in a low-income area of the city in cooperation with the community; a preservation, storage, and air and space craft display facility at Silver Hill, Maryland; a conference center at Elkridge, Maryland; two natural preserves, in Panama and on the Chesapeake Bay; an oceanographic sorting center in Washington and an oceanographic research facility in Fort Pierce, Florida; astrophysical stations in Cambridge, Massachusetts, Mt. Hopkins, Arizona, and elsewhere; and supporting administrative, laboratory, and storage areas.

A wide range of programs is conducted in cooperation with other institutions, universities, and government agencies in the United States and on every continent. Many of the research projects performed in nations abroad are funded through the use of excess foreign currencies. Through the preparation of research monographs, exhibit catalogues, education pamphlets, information leaflets, and other publications, research results are disseminated to a wide audience. Other education activities include radio, television, motion picture programs, the successful magazine Smithsonian, which now has nearly 1.5 million subscribers, and the Archives of American Art Journal.

Smithsonian Goals

The broad goals of the Institution are summarized as follows:

--Scientific and historical research is the foundation of the Institution's accomplishments and potential as manifested by the preparation and dissemination of scholarly research works and educational exhibits. Studies of man, his natural environment, and his cultural and technological progress are given high priority.

--Museum collections at the Smithsonian and in other museums in this country are extraordinarily valuable national resources. Consequently, the Institution has an important responsibility to ensure the careful growth, registration, conservation, documentation, storage, and accessibility of its own collections. It must also take a leadership role in the development of techniques and processes in collections management, preservation, and data exchange that will have applicability and benefit to all museums.

--The Institution's museums and laboratories are rich resources for education at all levels of public and academic interest. Concerted efforts must be given to reach new local and national audiences by means of traveling exhibitions, teacher-training workshops, school tours and extension services to schools, fellowships, opportunities for training in museum and laboratory skills, new publications, and television.

--Support resources (such as those applied to buildings maintenance, protection, registration, and exhibits preparation) currently available must be organized and used to provide responsive delivery of services to program needs and must be augmented when study indicates that current levels are deficient for acceptable response.

FY 1978 Budget Priorities

The priorities set forth in the FY 1978 budget request are the product of thorough planning and analysis by Smithsonian managers to determine where resources--both in the base and requested increases--can best be applied to further the accomplishment of the Institution's broad goals. The proposed budget is designed to sustain essential programs that are integral to the continued vitality and efficient operation of the Institution, and support a prudent level of growth to meet identified future responsibilities.

To provide a comprehensive picture of the application of resources, Institutional work is categorized in terms of program and support functions. Program categories used in the formulation of this budget consist of research, collections acquisition, collections management, exhibition, education and public orientation, and other services (the National Museum Act and the International Exchange Service). Support categories are comprised of conservation, libraries, automatic data processing, photography, printing and reproduction, protection, buildings and facilities management, and administration.

Specific priorities established for FY 1978 include augmentation of ongoing and new research activities, particularly those of an interbureau or interdisciplinary nature; development of exhibitions to be shown within the Institution as well as across the nation through the efforts of the traveling exhibition program; enhancement of collections management capabilities to support the Smithsonian's valuable resources; strengthening of the Institution's ability to acquire more representative collections, especially in art; and continuation of phased development of support services including protection, automatic data processing, libraries, buildings and facilities management with particular attention to the Zoo to ensure proper care for the valuable animals, and a sound administration program. In the area of capital development, major emphasis in FY 1978 is placed on the construction of a study center and library addition to the History and Technology Museum Building and the continuation of the program of essential repairs and improvements to the Institution's other buildings. Also, in FY 1978 and in the years ahead, attention will be devoted to the development of a Museum Support Center to ensure proper care of the Institution's collections, return a significant amount of Mall building space now used for collections storage to public use, and strengthen conservation programs and training.

For FY 1978 the Institution is requesting the following appropriations:

	<u>FY 1977 Appropriation</u>	<u>FY 1977 Supplemental</u>	<u>Requested 1978 Increase</u>	<u>FY 1978 Estimates</u>
Salaries & Expenses	\$82,106,000	\$3,326,000	\$3,601,000	\$89,033,000
Science Information Exchange	1,900,000	77,000	--	1,977,000
Special Foreign Currency Program	3,481,000	--	1,019,000	4,500,000
Construction & Improvements, National Zoological Park	6,580,000	--	-5,580,000	1,000,000
Restoration and Renovation of Buildings	2,950,000	--	6,750,000	9,700,000
Construction: Museum Support Center Planning	<u>--</u>	<u>--</u>	<u>325,000</u>	<u>325,000</u>
Totals	\$97,017,000	\$3,403,000	\$6,115,000	\$106,535,000

Highlights of the budget request are as follows:

A. Salaries and Expenses

<u>1976 Appropriation</u>	<u>1977 Estimate</u>	<u>1978 Estimate</u>
\$81,564,000	\$85,432,000	\$89,033,000

This appropriation provides for the regular operating programs in the museums, galleries, zoological park, research laboratories, and other program units; for special programs of an Institution-wide nature (such as the American and Folklife Studies Program); and for program support activities. This funding is allocated by major groups as follows: (Organizational allocations appear on pages A-2 and A-3).

	<u>1977 Base</u>	<u>Requested Increase</u>	<u>1978 Estimate</u>
Science	\$33,308,000	\$1,611,000	\$34,919,000
History and Art	13,747,000	624,000	14,371,000
Public Service	2,383,000	135,000	2,518,000
Museum Programs	6,783,000	318,000	7,101,000
Special Programs	1,960,000	-195,000	1,765,000
Administration	5,289,000	348,000	5,637,000
Support Activities	<u>21,962,000</u>	<u>760,000</u>	<u>22,722,000</u>
Totals	\$85,432,000	\$3,601,000	\$89,033,000

The requested increase of \$3,601,000 consists of program increases of \$3,595,000 and uncontrollable increases in the amount of \$960,000 offset by nonrecurring expenses of \$954,000. These are summarized as follows:

1. Program Increases: \$3,595,000

- Research - to support ongoing and important new programs in such areas as solar research, ornithology, tropical biology, folklife activities, and immigration and ethnic studies. Moreover, the requested increase will be used to further film documentation efforts of the National Anthropological Film Center, continue research on American Indian languages, and restore funding for the Research Awards Program to the FY 1976 level. (\$515,000)
- Collections Acquisition - to maintain a minimum art acquisition program, including related archival activities. Supplementing continued, active efforts to obtain gifts for the National Collections, these purchase funds are essential to acquire particular objects to establish fully representative reference collections or to display in new exhibitions. (\$171,000)
- Collections Management - to fund continuing costs associated with the study of collections management methods and collections activities related to the proposed Museum Support Center; to provide additional assistance for the receipt, accessioning, documentation, and care of the collections; and to develop and maintain programs of animal care and propagation for the living collections at the Zoo. (\$334,000)
- Exhibition - to maintain large areas of new exhibit space, resulting primarily from the installation of special Bicentennial exhibits, but also including new exhibit facilities at the Zoo; to support the small but important exhibit program of the Anacostia Neighborhood Museum; to enable the production and distribution of traveling exhibitions at a minimal rental cost; and to explore a variety of exhibit and design alternatives for potential use on the last building site on the Mall. (\$415,000)
- Education and Public Orientation - to expand research training opportunities by enabling additional pre- and postdoctoral scholars from around the nation to study the collections and perform other research at the Institution. (\$50,000)
- Conservation - to improve the capability for specialized treatment and conservation of valuable works of art located at the National Collection of Fine Arts and the Freer Gallery of Art. (\$30,000)
- Libraries - to permit the acquisition and efficient processing of library materials required to support the Institution's research and exhibit efforts. (\$105,000)
- Automatic Data Processing - to allow for the increased application of computer technology primarily in the area of astrophysical research, where the computer performs such essential functions as data reduction, numerical analyses, and conversion of observable astronomical objects into mathematical models. (\$391,000)
- Printing and Reproduction - to enable the Institution to disseminate to as wide an audience as possible information concerning significant current research, special performances, new exhibits, as well as information to assist in visitor orientation and understanding. (\$125,000)
- Protection - to provide adequate protection and security for the buildings and other facilities, exhibits, collections, and visitors and to continue the conversion to a Smithsonian-owned electronic security system. (\$475,000)
- Buildings and Facilities Management - to fund increased custodial and maintenance requirements, especially those associated with the new and restored facilities of the National Zoological Park; to meet the additional workload associated with

an expanded program of horticultural and landscape planning and installation; to cover increased rental and utility costs; and to provide additional management support to oversee the essential but complex building maintenance responsibilities. (\$630,000)

--General Administration - to strengthen the administration and management functions of the Smithsonian and to provide for the purchase of essential supplies and services in support of the Institution's programs. (\$354,000)

2. Uncontrollable Increases: \$960,000

--Necessary Pay and Related Benefits - to meet the projected higher cost of current employees caused by legislated pay raises, within-grade step increases, and higher costs of health benefits.

3. Program Decreases: -\$954,000

--To deduct funding for items in the base which are nonrecurring in FY 1978, including the remaining portion of special funds appropriated for the Smithsonian Bicentennial programs, and to reflect the savings in exhibit expenses of the National Air and Space Museum based on higher-than-expected completion rate when the building opened and the very favorable public reaction to existing displays in the new museum.

B. Science Information Exchange, Inc. (SSIE)

<u>1976 Appropriation</u>	<u>1977 Estimate</u>	<u>1978 Estimate</u>
\$1,940,000	\$1,977,000	\$1,977,000

The Science Information Exchange, Inc. acquires, processes, stores, and provides information on research projects as a service to the research community. The FY 1978 appropriation is requested at the same level as the FY 1977 estimate.

C. Special Foreign Currency Program

<u>1976 Appropriation</u>	<u>1977 Appropriation</u>	<u>1978 Estimate</u>
\$500,000	\$3,481,000	\$4,500,000

This appropriation will allow the Smithsonian to continue a program of grants to United States institutions for field research in those countries where "excess" local currencies are available. Research will be performed in the following general areas of Smithsonian Institution interest and competence: archeology and related disciplines, systematic and environmental biology, astrophysics and earth sciences, and museum programs. In addition, funds are included for the last of four annual payments, each of \$1,000,000 equivalent in "excess" Egyptian pounds, for the campaign to save the monuments of Nubia located on the Island of Philae.

D. Facilities Planning, Renovation, Restoration, and Construction

<u>1976 Appropriation</u>	<u>1977 Appropriation</u>	<u>1978 Estimate</u>
\$12,082,000	\$9,530,000	\$11,025,000

--Construction and Improvements, National Zoological Park (\$1,000,000) - The FY 1978 appropriation will be used for essential renovation, repair, and improvement projects at the Rock Creek Park Zoo and at the Front Royal, Virginia, Conservation and Research Center.

--Restoration and Renovation of Buildings (\$9,700,000) - The appropriation sought for FY 1978 stresses the sixth floor addition of a study center and library to the History and Technology Building; construction of a dormitory adjacent to the Multiple Mirror Telescope at the Mt. Hopkins Observatory; continued funding for phased projects including renovation of the Arts and Industries Building, repairs to the Renwick Gallery exterior and the History and Technology Building terrace, installation of building equipment monitoring systems, improvements for handicapped persons, correction of hazardous conditions, and installation of fire detection and control systems; modifications for employee safety and health at Silver Hill; and general repairs and improvements for building preservation and safety purposes.

--Construction: Museum Support Center Planning (\$325,000) - Funds requested in FY 1978 will be used to begin architectural and engineering planning for the construction of a Museum Support Center. The Center will provide additional space for the care, curation, documentation, conservation, preparation, and study of the National Collections, and for increased activity in conservation research and training.

Tab A

SALARIES AND EXPENSES

SMITHSONIAN INSTITUTION

SALARIES AND EXPENSES

Summary of Increase FY 1978

Appropriation, FY 1977	\$82,106
Proposed Pay Supplemental	<u>3,326</u>
Base, FY 1977	\$85,432
FY 1978 Request	<u>89,033</u>
Requested Increase	\$3,601

SMITHSONIAN INSTITUTION
"Salaries and Expenses"
Summary of the 1976 Appropriation and the 1977 and 1978 Estimates

(Dollars in thousands)

Page No.	Unit	1976 Actual		T.Q. Actual		1977 Estimate		1978 Estimate		Analysis of Increase			
		Pos.	Amount	Pos.	Amount	Pos.	Amount	Supple- mental	Total	Pos.	Amount	Uncontrol- lable	Program
Science													
A-6	Assistant Secretary for Science	9	278	9	135	9	283	10	293	-	9	4	-
A-7	National Museum of Natural History	484	10,462	484	2,815	495	10,825	553	11,378	3	11,652	149	125
A-10	Astrophysical Observatory	69	3,618	69	1,324	73	3,835	126	3,961	6	4,487	26	500
A-15	Tropical Research Institute	61	1,402	61	383	63	1,413	52	1,465	64	1,563	15	83
A-17	Radiation Biology Laboratory	48	1,550	48	507	49	1,852	43	1,895	49	1,926	14	17
A-19	Office of International Programs	14	281	14	63	11	241	10	251	-	254	3	-
A-20	Chesapeake Bay Center	20	516	20	137	21	572	26	598	-	607	9	-
A-22	National Air and Space Museum	230	5,634	230	1,052	230	5,896	212	6,108	-	5,786	73	-395
A-24	National Zoological Park	301	6,139	301	1,663	305	6,578	404	6,982	324	7,780	98	700
A-27	Center for the Study of Man	12	355	12	145	13	363	14	377	15	567	5	185
	Subtotal, Science	1,248	30,235	1,248	8,224	1,269	31,858	1,450	33,308	1,300	34,919	396	1,215
History and Art													
A-30	Ass't Secretary for History & Art	9	231	9	68	8	221	12	233	-	8	1	-
A-31	Museum of History & Technology	265	5,451	265	1,488	268	5,681	234	5,915	5	6,126	61	150
A-33	National Collection of Fine Arts	104	2,281	104	621	106	2,451	100	2,551	-	2,693	37	105
A-37	National Portrait Gallery	74	1,693	74	497	75	1,844	73	1,917	-	2,015	28	70
A-39	Hirshhorn Museum & Sculpture Garden	83	1,559	83	440	83	1,806	79	1,885	-	1,958	23	50
A-42	Freer Gallery of Art	28	467	28	106	29	501	24	525	30	549	9	15
A-44	Archives of American Art	15	314	15	97	15	339	15	354	17	419	5	60
A-46	Cooper-Hewitt Museum	15	242	15	100	19	352	15	367	-	377	10	-
	Subtotal, History and Art	593	12,238	593	3,417	603	13,195	552	13,747	8	14,371	174	450
Public Service													
A-47	Ass't Secretary for Public Service	8	135	8	40	8	186	9	195	-	8	2	-
A-48	Anacostia Neighborhood Museum	19	441	19	226	19	525	18	543	-	19	5	60
A-50	International Exchange Service	9	168	9	48	9	215	7	222	-	9	2	-
A-51	Division of Performing Arts	11	576	11	567	9	338	10	348	-	9	2	-
A-53	Office of Public Affairs	16	337	16	148	17	381	13	394	-	17	6	50
A-55	Smithsonian Institution Press	27	618	27	194	28	650	31	681	-	28	8	-
	Subtotal, Public Service	90	2,275	90	1,223	90	2,295	88	2,383	-	90	25	110

Page No.	Unit	1976 Actual		T.Q. Actual		1977 Estimate		1978 Estimate		Analysis of Increase	
		Pos.	Amount	Pos.	Amount	Pos.	Amount	Pos.	Amount	Pos.	Uncontrol- lable Program
<u>Museum Programs</u>											
A-56	Ass't Secretary for Museum Programs	82	1,356	82	433	89	1,719	85	1,804	93	1,843
A-60	Office of the Registrar	4	200	4	20	4	92	4	96	4	97
A-61	Conservation-Analytical Laboratories	23	563	23	133	23	600	22	622	23	629
A-62	Smithsonian Institution Libraries	90	1,770	90	574	95	1,986	70	2,056	96	2,190
A-64	Office of Exhibits Central	48	972	48	263	48	1,013	48	1,061	48	1,072
A-65	Traveling Exhibition Service	6	101	6	54	6	100	4	104	8	206
A-69	Smithsonian Archives	11	211	11	98	12	237	11	248	13	272
A-71	National Museum Act	3	696	3	280	3	790	2	792	3	792
	Subtotal, Museum Programs	267	5,869	267	1,855	280	6,537	246	6,783	288	7,101
<u>Special Programs</u>											
A-74	American Rev. Bic. Program	2	3,749	2	2,051	2	410	2	412	-	-
A-75	American and Folklife Studies	2	54	2	14	4	127	6	133	4	233
A-77	International Environmental Science	2	333	2	50	2	365	8	373	2	375
—	Major Exhibition Program	-	247	-	-	-	-	-	-	-	-
A-79	Academic and Educational Programs	12	618	12	187	12	641	11	652	12	707
A-82	Research Awards Program	-	53	-	101	-	390	-	390	-	450
	Subtotal, Special Programs	18	5,054	18	2,403	20	1,933	27	1,960	18	1,765
A-84	Administration	207	4,787	207	1,631	217	5,021	268	5,289	221	5,637
										4	273
<u>Support Activities</u>											
A-89	Printing and Photographic Services	39	835	39	210	39	864	33	897	39	931
A-90	Office of Protection Services	527	6,282	527	2,422	527	7,378	306	7,684	547	8,268
A-93	Office of Plant Services	300	10,701	300	3,261	327	13,025	356	13,381	328	13,523
	Subtotal, Support Activities	866	17,818	866	5,893	893	21,267	695	21,962	914	22,722
										21	200
	TOTAL	3,289	78,276	3,289	24,646	3,372	82,106	3,326	85,432	3,442	89,033
										70	960
											2,641

SMITHSONIAN INSTITUTION
FY 1978 UNCONTROLLABLE INCREASES

Additional funds are sought to finance costs that are beyond the control of the Institution. These increases result from law, prevailing practices of wage setting, and higher health benefits costs. A total of \$960,000 is requested for necessary pay and related benefits.

NECESSARY PAY AND RELATED BENEFITS - An amount of \$960,000 is required for personnel compensation and benefits for the projected higher costs in FY 1978 of FY 1977 staff. These increases accrue to employees as a result of within-grade step increases, legislated pay raises, and higher costs of health benefits. Costs are calculated on a position-by-position analysis taking into consideration approved new hires in the current year and savings from turnover and filling of vacancies at lower grades where possible. Absorption of these costs from currently available funds seriously impairs approved program activity. First, for every \$14,000 that must be applied to these costs from funds already in salaries and benefits, one staff-year of approved employment is lost. Second, if other object class funds must be applied to these costs, otherwise productive employees are left without the supplies, tools, and equipment they need to perform their jobs well. These additional costs are attributable to the following externally imposed factors.

(1) Within-grade Step Increases - Necessary pay funding of \$918,000 is required in FY 1978 for within-grade step increases. For General Schedule employees, such increases are required by 5 U.S.C. 5335. Wage employees are covered by law and prevailing practice. Such increases must be granted if employees are performing at acceptable levels of competence. In any one fiscal year, the costs of within-grade increases are substantial. These increases include the part-year cost of new actions in the current year as well as the cost of annualizing step increases granted in the prior fiscal year.

The General Schedule portion of this request amounts to \$737,000. There are over 2,600 General Schedule employees with some 1,520 scheduled to receive new within-grade increases. The Wage portion amounts to \$181,000. There are over 900 Wage positions with some 460 scheduled to receive new within-grade increases.

(2) Annualization of Legislated Pay Raises - Funds in the amount of \$126,000 are requested to annualize the General Schedule and Wage pay increases effected in FY 1977.

In accordance with P.L. 91-656, General Schedule salary scales are adjusted each October to rates comparable to those paid for similar work in private industry. The total annual cost of the raise that went into effect October 10, 1976 is estimated to be \$2,413,000. A supplemental appropriation of \$2,367,000 is being sought in FY 1977. The balance of \$46,000 is requested in FY 1978 to provide full-year funding.

Wage raises are granted under the authority of 5 U.S.C. 5341. Prevailing practices call for Wage pay scales to be reviewed by a Wage Finding Authority in each geographic area. In the Washington area, this has resulted in Wage employees receiving a pay raise in October of each year. Smithsonian Wage employees in Panama, Maryland, Virginia, Arizona, and New York receive similar wage hikes at other times. The Washington area personnel received a pay raise in excess of 8 percent in October, 1976. Raises in other geographic areas have been estimated on the same basis. The total annual cost of these raises is estimated to be \$1,039,000. A supplemental of \$959,000 is being sought in FY 1977 while the balance of \$80,000 is requested in FY 1978 to provide full-year funding.

(3) Health Benefits - Effective January, 1977, nearly all the health insurance carriers which serve the Smithsonian Federal employees have received approval from the Civil Service Commission to increase their rates. Based on an analysis of currently enrolled employees, these increases will result in an additional annual cost to the Institution of \$76,000. Funds are requested to cover these higher costs in FY 1978.

(4) Reduction for One Less Working Day - An amount of \$160,000 has been used to offset the above increases. FY 1978 will have 260 paid work days, one less than in FY 1977.

The distribution of the requested FY 1977 pay and benefits supplemental appropriation totaling \$3,326,000 is distributed by organizational unit on pages A-2 and A-3. Necessary pay in the amount of \$960,000 is distributed by organization unit and purpose below.

Necessary Pay
FY 1978

(Dollars in thousands)

<u>Unit</u>	<u>Within Grades</u>	<u>Annualization of Raises</u>		<u>Health Benefits</u>	<u>Extra Day</u>	<u>Total</u>
		<u>GS</u>	<u>Wage</u>			
Assistant Secretary for Science.....	5	-	-	-	-1	4
National Museum of Natural History.....	150	10	4	14	-29	149
Smithsonian Astrophysical Observatory.....	24	2	5	1	-6	26
Smithsonian Tropical Research Institute...	14	1	2	1	-3	15
Radiation Biology Laboratory.....	14	1	1	1	-3	14
Office of International Programs.....	4	-	-	-	-1	3
Chesapeake Bay Center.....	9	-	1	-	-1	9
National Air and Space Museum.....	63	2	5	9	-6	73
National Zoological Park.....	74	3	26	9	-14	98
Center for the Study of Man.....	6	-	-	-	-1	5
Assistant Secretary for History and Art...	2	-	-	-	-1	1
National Museum of History & Technology...	59	3	4	7	-12	61
National Collection of Fine Arts.....	36	2	1	2	-4	37
National Portrait Gallery.....	26	1	1	2	-2	28
Hirshhorn Museum and Sculpture Garden.....	21	1	2	2	-3	23
Freer Gallery of Art.....	8	1	1	-	-1	9
Archives of American Art.....	6	-	-	-	-1	5
Cooper-Hewitt Museum.....	6	-	5	-	-1	10
Assistant Secretary for Public Service....	3	-	-	-	-1	2
Anacostia Neighborhood Museum.....	6	-	-	-	-1	5
International Exchange Service.....	2	-	1	-	-1	2
Division of Performing Arts.....	3	-	-	-	-1	2
Office of Public Affairs.....	7	-	-	-	-1	6
Smithsonian Institution Press.....	8	1	-	-	-1	8
Assistant Secretary for Museum Programs...	26	-	4	1	-2	29
Office of the Registrar.....	1	-	-	-	-	1
Conservation-Analytical Laboratory.....	7	1	-	-	-1	7
Smithsonian Institution Libraries.....	29	2	-	2	-4	29
Office of Exhibits Central.....	11	2	-	1	-3	11
Smithsonian Traveling Exhibition Service..	3	-	-	-	-1	2
Smithsonian Archives.....	5	-	-	-	-1	4
Internat'l Environmental Science Program..	2	-	-	-	-	2
Academic and Educational Programs.....	5	-	-	-	-	5
Administration.....	80	4	-	5	-14	75
Printing and Photographic Services.....	10	1	-	-	-2	9
Office of Protection Services.....	110	6	-	12	-19	109
Office of Plant Services.....	73	2	17	7	-17	82
TOTAL	918	46	80	76	-160	960

OFFICE OF THE ASSISTANT SECRETARY FOR SCIENCE

1976 Actual.....\$278,000
T.Q. Actual.....\$135,000
1977 Estimate.....\$293,000
1978 Estimate.....\$297,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	<u>9</u>	<u>0</u>	<u>9</u>
11 Personnel Compensation.....	181	4	185
12 Personnel Benefits.....	18		18
21 Travel & Trans. of Persons...	13		13
23 Rent, Comm. & Utilities.....	2		2
25 Other Services.....	69		69
26 Supplies and Materials.....	<u>10</u>		<u>10</u>
 TOTAL	 <u>293</u>	 <u>4</u>	 <u>297</u>
 <u>Analysis of Increase</u>			
Necessary Pay.....		4	
Program Funds.....		<u>0</u>	

ABSTRACT - This Office is responsible for overall planning, coordinating, and reviewing the progress of the 12 science bureaus and programs within the Institution. No program increase is sought for FY 1978. Necessary pay in the amount of \$4,000 is required for existing staff.

PROGRAM - The Office of the Assistant Secretary for Science advises and assists the Secretary in planning, implementing, and reviewing the progress of the Smithsonian science programs. The bureaus and other activities reporting to the Assistant Secretary for Science are the National Museum of Natural History, the Radiation Biology Laboratory, the Tropical Research Institute, the National Zoological Park, the National Air and Space Museum, the Astrophysical Observatory, the Office of International Programs, the Chesapeake Bay Center for Environmental Studies, the Science Information Exchange, and the Fort Pierce Bureau. Additionally, this Office is responsible for the administration of two multi-bureau activities, the Research Awards Program and the International Environmental Science Program, and provides the Institution's liaison with national and international science organizations and representation on national and international science boards and commissions.

NATIONAL MUSEUM OF NATURAL HISTORY

1976 Actual.....\$10,462,000
 T.Q. Actual.....\$ 2,815,000
 1977 Estimate.....\$11,378,000
 1978 Estimate.....\$11,652,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	495	3	498
11 Personnel Compensation.....	9,337	230	9,567
12 Personnel Benefits.....	896	22	918
21 Travel & Trans. of Persons...	120	4	124
22 Transportation of Things.....	45		45
23 Rent, Comm. & Utilities.....	31		31
24 Printing and Reproduction....	167		167
25 Other Services.....	421	6	427
26 Supplies and Materials.....	246	5	251
31 Equipment.....	115	7	122
TOTAL	11,378	274	11,652
<u>Analysis of Increase</u>			
Necessary Pay.....		149	
Program Funds.....		125	

ABSTRACT - The National Museum of Natural History (NMNH) serves as a center for the natural sciences. It maintains large reference collections and conducts programs of identification and documentation, research, collections management, exhibits, and education--including collaborative projects with universities and other institutions of learning. An increase of 3 positions and \$125,000 is requested for FY 1978 to meet the following requirements: (1) Collections Management--3 positions and \$30,000 to provide additional assistance for the curation, maintenance, and improvement of the National Collections; (2) Research--\$55,000 for the salaries of a bird specialist and 2 research technicians to study the evolution, history, and extinction of birds; and \$40,000 to support the continuing important research on American Indian languages. An additional amount of \$149,000 is sought for necessary pay for existing staff.

PROGRAM - This Museum serves as a national and international center for the natural sciences. It maintains the largest reference collections in the nation (over 60 million objects) and has the legal responsibility (20 U.S.C. 59) to serve as the ultimate repository of all collections and objects of natural history, archeology, and ethnology made by agencies of the Government when no longer needed by those agencies for investigations in progress. Additionally, the NMNH is the repository for numerous extremely valuable collections obtained from other sources, such as the scientific community and academic institutions as well as many private individuals.

The scientists at the Museum conduct a broad program of basic research on man, plants, animals, fossil organisms, rocks, minerals, sediments, and materials from outer space. Their fundamental studies in biology are providing new information required for the solution of major problems of conservation, pollution, food production, improvement of medical knowledge, and for planning national and international programs leading to predictive ecology and environmental management. The scientific and technical results which flow from this research are made available to others by an active and large publications program.

The Oceanographic Sorting Center prepares and distributes animal and plant materials to scientists from 200 agencies around the world who are concerned with marine pollution, ocean dumping, pollution monitoring, environmental prediction, and systematics studies.

The Scientific Event Alert Network, which became part of NMNH in FY 1976, is responsible for providing timely notice of short-lived natural scientific phenomena and events, such as volcano activity, meteorite falls, and earthquakes, to scientists and other concerned professionals within and outside of the Smithsonian.

Over 4.5 million people have visited the Museum in 1976, including many thousands of school children attracted by the exhibits. A major program of exhibit improvement was begun in FY 1974 with the creation of two new exhibits: "Ice Age Mammals and the Emergence of Man" and the very successful "Discovery Room," an area in which visitors may handle exhibits and specimens. In FY 1976, two additional major new exhibits were completed and opened to the public: the Museum's Bicentennial exhibit entitled "Our Changing Land" which depicts changes wrought by man and nature over the last ten thousand years in the Washington, D.C. area, and an exhibit on South America entitled "A Continent and Its Culture" which deals with the culture and environment of South America. In addition, the popular "Insect Zoo" was opened as a new exhibit and a major effort to upgrade existing exhibitions was undertaken.

As part of its education program, the Museum provides assistance for elementary and secondary school groups. In addition, many members of the scientific staff participate in joint educational programs with universities by teaching courses, training graduate students, and conducting science seminars. The Museum also provides leadership in the improvement of museum techniques and collections management, especially through the application of computer technology. With the completion in mid-1976 of the Museum's new West Court addition which houses the Education Learning Center and the Naturalist Center, major new educational resources were made available to the public. The Learning Center has four classrooms and an assembly area for the use of visiting groups of students. The Naturalist Center, designed for the amateur naturalist, features representative collections from many groups of organisms as well as rocks, minerals, and anthropological materials. The resources of the Center, including the collections, the library, and the volunteer assistants, are available to amateur naturalists.

JUSTIFICATION OF \$125,000 INCREASE:

Collections Management - In FY 1972, the Museum instituted a long-range program designed to provide an average of three support personnel for each staff scientist to foster maximum efficiency and use of professional personnel. Although still far from reaching its goal, steady progress has been achieved in the past few years. An additional 3 technician positions and \$30,000 are requested to sustain this progress in FY 1978 and to provide a ratio of 1.79 support personnel to each scientist. The additional technicians will be used to help care for the collections which are being subjected to damage and loss because of slowly evaporating preservative fluids, crumbling labels, and deteriorating containers. Care of these collections is of the utmost importance in order that they may be preserved for study and exhibit purposes.

Research - Island Birds: A History of Colonization, Survival, and Extinction-- Human occupation of remote and isolated habitats has led to extinction or drastic reduction of unique bird populations which are now threatened even in the smallest and most remote areas. The research being conducted at NMNH combines studies of both healthy and endangered bird populations and the fossilized remnants of past populations. This research is aimed toward the development of predictions of potential extinctions and the issuance of guidelines for the preservation of endangered populations. The \$55,000 requested increase will permit this important research to continue.

Study of American Indian Languages-- When Europeans came to North America, they found the native population organized into numerous tribes and subgroups who communicated among themselves in approximately 300 distinct languages. These languages, although well-developed, were not committed to writing. Consequently, scholars are making intensive efforts through creation of writing systems, development of grammars, and compilation of dictionaries to record as much as possible of each of these languages

before they are lost. The Smithsonian Institution is now undertaking a major effort to publish a comprehensive encyclopedia entitled The Handbook of North American Indians which will incorporate detailed information about as many tribal groups as possible including myths, lexicons, synonymies, and other linguistic materials. The results of this work will be of great interest not only to scholars but to the Indians themselves whose heritage and traditions are all too rapidly disappearing. Funds in the amount of \$40,000 are requested to provide for a resident linguist who can concentrate on the numerous Indian language issues associated with the Handbook in a deliberate and continuous manner. This specialist would be available both to the NMNH and the Center for the Study of Man in order to derive maximum benefits from his contributions.

SMITHSONIAN ASTROPHYSICAL OBSERVATORY

1976 Actual.....\$3,618,000
T.Q. Actual.....\$1,324,000
1977 Estimate.....\$3,961,000
1978 Estimate.....\$4,487,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	<u>73</u>	<u>6</u>	<u>79</u>
11 Personnel Compensation.....	2,107	153	2,260
12 Personnel Benefits.....	202	15	217
21 Travel & Trans. of Persons..	60		60
22 Transportation of Things....	44		44
23 Rent, Comm. & Utilities.....	254	10	264
24 Printing and Reproduction...	28	9	37
25 Other Services.....	688	338	1,026
26 Supplies and Materials.....	306	1	307
31 Equipment.....	<u>272</u>		<u>272</u>
TOTAL	<u>3,961</u>	<u>526</u>	<u>4,487</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		26	
Program Funds.....		500	

ABSTRACT - The Smithsonian Astrophysical Observatory (SAO), established in 1890, has as its primary goal to increase and diffuse knowledge about the Earth and the Universe as related to astrophysics. To accomplish this, SAO conducts a broad program of research in eight closely interrelated scientific areas: theoretical astrophysics, high-energy astrophysics, solar and stellar physics, geoastronomy, optical and infrared astronomy, radio astronomy, atomic and molecular physics, and planetary sciences. Essential to the conduct of these research programs are the gathering of data using both ground-based and space-borne instruments and the reduction and analysis of data as well as the formulation of mathematical models of astrophysical systems, all of which rely heavily on the use of computers. For these purposes, SAO maintains a multi-purpose observing facility at Mt. Hopkins, Arizona, and a number of small observing stations around the world, participates in NASA-sponsored scientific space-borne experiments, and operates a relatively large computer at its headquarters in Cambridge, Massachusetts.

For FY 1978, 6 additional positions and \$500,000 are being requested for the following: (1) Research--an amount of \$50,000 (for a term appointment of a senior theoretical plasma physicist and other support) to conduct studies under the Langley-Abbot Program relating to the dynamics of the interior of the Sun; (2) Automatic Data Processing--\$325,000 to purchase additional computer time from a faster and larger capacity computer (to be operated by the Observatory's computer cost center) for the purpose of scientific data reduction, numerical analyses, and mathematical modeling in direct support of the Observatory's research program; and (3) General Administration--6 positions and \$125,000 for the conversion of grant and contract supported administrative and support personnel to the Federal roll as the final step in the process of correcting the funding imbalance at SAO. Necessary pay in the amount of \$26,000 is required for existing staff.

PROGRAM - Since 1890, when it was founded by Samuel Pierpont Langley, the Smithsonian Astrophysical Observatory has pursued a broad program of astrophysical research, often in support of national goals. Beginning with its pioneer

investigations concerning the relationship between solar energy and the terrestrial environment, which now are conducted under the Langley-Abbot Program, the SAO has remained in the forefront of modern astrophysics with today's research directed to seek and reveal the basic processes in cosmic evolution. Critical to the understanding of the basic processes in cosmic evolution are the solutions of two broad, but strongly interrelated scientific problems: (1) the evolution of matter, starting with the explosive beginnings of the Universe some 20 billion years ago--following the formation of galaxies and stars, some matter collapses into unusual objects, such as quasars, neutron stars, and black holes. The extreme physical conditions found in these objects test fundamental principles of physics, including Einstein's Theory of Relativity and modern theories of elementary particles; and (2) the problem of cosmic matter that has cooled to the point that molecules and solid particles form--the condensation of materials accompanying the formation of a star like the Sun results in the formation of planets and, ultimately, in the emergence of life.

SAO's search for an understanding of the basic processes of cosmic evolution--through studies of the evolution of stars and galaxies and through studies of the Earth, the solar system, and cooled matter in space--is being conducted through studies in eight closely interrelated research fronts:

1. Theoretical Astrophysics--construction of model stellar atmospheres; investigation of massive and high-density stars; cosmology; studies of galactic evolution; and physics of interstellar matter.
2. High-Energy Astrophysics--observations of high-energy sources emitting x-rays and/or gamma-rays.
3. Solar and Stellar Physics--observational and theoretical studies of solar and stellar processes; and studies of solar evolution.
4. Geoastronomy--studies of the Earth's kinematics; geodesy and geophysics; and celestial mechanisms.
5. Optical and Infrared Astronomy--observations of infrared sources; stellar and planetary observations; and studies of stellar evolution.
6. Radio Astronomy--observation of celestial radio sources; laboratory and observational studies of interstellar molecules; and investigations of chemical constituents in the interstellar medium.
7. Atomic and Molecular Physics--laboratory astrophysics, shock tube, and ultra-violet vacuum spectroscopy; and atomic and particle physics.
8. Planetary Sciences--studies of the structure and composition of planetary atmospheres; studies of asteroids, meteorites, cosmic dust, comets, and meteors; studies of lunar and other extraterrestrial materials; and studies pertaining to the evolution of the solar system.

In support of these investigations, data is obtained from laboratory experiments, ground-based observations, and space-borne observations and experiments. Laboratory experiments are conducted at SAO's Cambridge facilities; ground-based observations are carried out primarily at SAO's Mt. Hopkins Observatory in Arizona and networks of small astrophysical observing stations, as well as at other major observatories located in the United States and other countries; and space-borne observations and experiments are made possible through the National Aeronautics and Space Administration's (NASA) space science programs which are planned and defined with the participation of SAO's scientific staff and those of other research institutions. Data acquired by all these methods together provides the basis for the formulation of mathematical models of astrophysical systems and processes, all of which rely heavily on the use of SAO's computer facility. Together, the investigations

and mathematical modelling will lead to an understanding of the basic processes in cosmic evolution.

JUSTIFICATION OF \$500,000 INCREASE:

Research: Langley-Abbot Program - The Langley-Abbot Program of solar research is based on applying experimental and theoretical techniques toward solving outstanding problems concerning the Sun and the Sun-Earth environment. The program was initiated in FY 1976. Under the direction of the first Langley-Abbot Fellow assisted by two postdoctoral research assistants, a recommendation and reappraisal was initiated with regard to Dr. Samuel Langley's and Dr. Charles Abbot's studies dealing with the relationships between solar activity and terrestrial phenomena. Also, solar constant data gathered by Abbot during 50 years of observations at remote field stations is being compared with ultraviolet and infrared data collected by instruments aboard NASA's Skylab satellite. Preliminary results relating to the Sun's most fundamental properties, such as its shape, rotation, and total luminosity, indicate that these "constant" quantities seem to be undergoing changes on a human time scale. Although these variations trouble the confidence accepted in our physical understanding of the Sun, they also offer potentially extremely valuable probes of the solar interior. Such basic questions as to how solar energy is generated and transported to the surface and how the magnetic field of this enormous celestial body manages to oscillate and switch polarity every 11 years must be studied again to gain new insights. For these purposes, an increase of \$50,000 is being requested for FY 1978 to support the term appointment of another Langley-Abbot Fellow (a senior plasma physicist) and one or two part-time postdoctoral research assistants.

Automatic Data Processing - Modern astrophysics is critically dependent upon fast and powerful computers, not only for scientific data reduction and numerical analyses, but for constructing mathematical problems of observable astronomical objects. By comparing the resulting models with the actual observations, one can obtain better understanding of the Universe. Because the equations of stellar structure are extremely complex, computers are essential for solving them. A mathematical model of a star can be generated in a few minutes on a computer; the same job would take a year by hand.

The Observatory possesses an extensive, valuable, and growing data base on the Earth, the Sun, the Inter-Stellar Medium, and the High-Energy Universe acquired through ground-based and space-borne observations. Its theoretical capability to understand these data (for instance, the data on the Sun is likely to reveal the mechanism that heats the corona and drives the solar wind) has not been realized, however, because of critical lack of sufficient amounts of computing time and equipment with adequate capacity.

The computer presently in use was purchased in 1968 with funds provided to the SAO by NASA. This computer, now 9 years old, no longer can provide the required support to the SAO research programs, even though it operates 24 hours a day, seven days a week. Its limitations are twofold: the slow processing speed limits the amount of data that can be processed through the computer; and the size of its central memory makes it impossible to process large-scale calculations. In addition, equipment malfunctions resulting from many years of extensive use are more frequent, and the cost of maintenance is rising sharply from year to year. Thus, after 9 consecutive years of continuous use, the existing computer has reached a state of technological and economical obsolescence.

As the limitations of the existing computer became a reality--especially in terms of its memory limitation--a number of the Observatory's scientists were forced to process their large-scale computations at other facilities often far removed from their offices and laboratories on a "where-and-when" available basis. The ad hoc nature

of this assistance frequently creates undue delays in the research work, entails travel expenses, and generally results in an inefficient use of scientists' time.

Since the need for advanced computing will continue and grow, an additional \$325,000 is requested to purchase additional time from a replacement computer (to be operated by the Observatory's cost center) that will have three times the speed and two times the memory of the existing machine. The estimated annual cost of this replacement computer to its users will be about \$500,000 based on a five-year lease. The Observatory will provide the other approximately \$175,000 from its currently available funds.

General Administration - In FY 1975, the first step was taken to correct the imbalance that had developed during the preceeding years between SAO's Federally-funded and grant- and contract-funded general administrative and support activities. To date \$275,000 has been authorized and appropriated for this purpose. This represents approximately 70 percent of the total of about \$400,000 needed to correct this imbalance. As a final step in solving this problem, 6 positions and \$125,000 are requested in FY 1978. Trained and capable administrative and support personnel, currently supported by grant and contract funds, will be hired to fill these positions which include a property administrator, senior procurement agent, mechanical engineer, personnel assistant, payroll administration clerk, and secretary.

SAO Research Highlights and Other Developments

Accomplishments in FY 1976 and Transition Quarter.

- Detection of so-called "cosmic bursters," intense, intermittent pulses of x-rays emitted from the centers of globular clusters.
- Rocket flight of x-ray detector for observations of extra-galactic x-ray sources that produced the first x-ray map of Perseus cluster of galaxies.
- Launch and subsequent tracking of the SAO-designed LAGEOS satellite, an extremely dense, mechanically and electronically inert satellite used as a stable reference point for ground-based lasers, thus providing data on crustal movements, polar motion, and variations in the rotation of the Earth.
- Joint sponsorship with Harvard and Radcliffe of a symposium on "Space for Women: Perspectives on Careers in Science."
- Successful testing of the equivalence principle of Einstein's Theory of Relativity with the sub-orbital flight of an SAO-designed and built hydrogen maser clock.
- Studies in the Langley-Abbot Program of solar research designed to increase understanding of the possible relationship between solar activity and long-term terrestrial climatic variations.
- Development of new theories on the properties of Saturn's rings, including the suggestion that the outer ring may have a spiral structure.
- Completion of the optics and active-optics alignment system for the Multiple Mirror Telescope, plus construction of the telescope pier and housing foundation and installation of the bearing support and yoke base.
- Initiation of a new--and successful--Summer Intern Work/Learn Program designed to encourage high school students--particularly women and members of minority groups--to pursue science careers.

Research Activities Expected in FY 1977.

- Space flight of a cosmic x-ray detector aboard the first High-Energy Astronomical Observatory (HEAO-A) satellite.
- Improvement of the SAO laser tracking systems and refinement of SAO Standard Earth based on observations of the LAGEOS satellite.
- Completion and operation of a new ion-beam facility for laboratory studies of atomic and molecular processes in support of ground-based and flight observations.
- Flight of 1-m balloon-borne telescope for infrared observations of the heavens, particularly the Milky Way.
- Construction of the housing for the Multiple Mirror Telescope at Mt. Hopkins, installation of the optical system, and first test operations.
- Publication of "Space for Women: Perspectives on Careers in Science," a guide book for aspiring young scientists derived from a symposium sponsored by the Smithsonian, Harvard, and Radcliffe.
- Sponsorship of four major lecture series for the general public on modern astrophysics in Washington, Cambridge, Tucson, and Boston.

Research Activities Expected in FY 1978.

- Flight of a high-resolution x-ray telescope aboard the second High-Energy Astronomy Observatory satellite (HEAO-B).
- Design and preparation of the Faint Object Spectrograph, a major component of the Space Telescope to be flown aboard the Space Shuttle in the 1980's.
- Development of the Skyhook experiment to study the mid-regions of the Earth's atmosphere as part of the Space Shuttle program.
- Dedication, followed by routine operations, of the Multiple Mirror Telescope at Mt. Hopkins.

SMITHSONIAN TROPICAL RESEARCH INSTITUTE

1976 Actual.....\$1,402,000
T.Q. Actual.....\$ 383,000
1977 Estimate.....\$1,465,000
1978 Estimate.....\$1,563,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	<u>63</u>	<u>1</u>	<u>64</u>
11 Personnel Compensation.....	911	43	954
12 Personnel Benefits.....	150	4	154
21 Travel & Trans. of Persons...	54	4	58
22 Transportation of Things.....	7		7
23 Rent, Comm. & Utilities.....	69	10	79
24 Printing and Reproduction...	6	4	10
25 Other Services.....	50	13	63
26 Supplies and Materials.....	180	18	198
31 Equipment.....	<u>38</u>	<u>2</u>	<u>40</u>
TOTAL	<u>1,465</u>	<u>98</u>	<u>1,563</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		15	
Program Funds.....		83	

ABSTRACT - The Smithsonian Tropical Research Institute (STRI) conducts advanced studies in ecology, behavior, and evolution and is responsible for related programs in advanced education and conservation. Within the tropics are found those areas with the greatest diversity of life on earth--rain forests and coral reefs. Much of the research being carried out at the Institute is devoted to understanding the ways tropical organisms interact with their environment. STRI currently administers about 10,000 acres of tropical lowland forest as a biological reserve and research station including Barro Colorado Island (20 U.S.C. 79a-79e). These areas contain many species of birds, mammals, and reptiles which are either threatened or endangered due to the accelerating rate of cutting of forests in the new world tropics. Examples of the more commonly known mammals which reside in areas of STRI protection are the tapir, ocelot, jaguar, puma, margay, red spider monkey, howler monkey, and the Central American otter.

In FY 1978, an increase of 1 position and \$83,000 is requested to meet the following research and operational requirements: 1 position and \$33,000 to study the behavior of mammals with particular respect to their interaction with their environment; and \$50,000 to keep pace with higher costs in other object classes of expense. Necessary pay in the amount of \$15,000 is requested for existing staff.

PROGRAM - While expanding its conservation activities aimed at preserving the genetic reservoir of life on earth, STRI is continuing its studies of the diversity of tropical organisms and the complexity of their relationships. Fundamental and applied research are part of the same intellectual spectrum and a number of STRI projects are of direct application to understanding the problems of the rapidly increasing human interaction with natural tropical areas. For example, clearings in tropical forests appear both naturally and through human activity. Man clears forests for farms, roads, dams, etc. Nature provides clearings through single treefalls, storm-induced clearings, such as the 1.5 hectare opening produced on Barro Colorado Island in 1973, or more spectacularly, the hundreds of hectares of forest which were scoured away by the forces of an earthquake on the Colombia-Panama border last June. STRI staff and students are studying the comparative recolonization process under natural conditions in these areas to provide the data necessary to understand the process of forest development, succession, and persistence. Moreover, although the current area under STRI control in the Canal Zone is relatively small, there has been significant accomplishment toward extending conservation activities to other environments on the Isthmus.

During FY 1977, the permanent scientific staff totals 19 persons. There also have been 16 long-term pre- and postdoctoral students associated with STRI, and over 60 students with privately funded fellowships for one to six month periods. Many of these fellowships provided training for students from less developed countries. It is anticipated that an additional 1,400 visitors from all over the world will have used STRI facilities for shorter periods. In FY 1977, 100 seminars will be held and over 80 scientific papers published by the staff and associates including the first important book on behavior and communication of the new world primates.

JUSTIFICATION OF \$83,000 INCREASE:

Research - Mammals are among the most sensitive indicators of human interference of natural environments. STRI wishes to undertake research using radio-telemetry of mammals to help provide the first data on the densities of several important forest mammals. The data derived from this work is essential to understanding the role of mammals as primary consumers of tropical plants and their role in the dispersal of seeds, a most critical step in the recolonization of forests. Also, ecologists at STRI have been consulted by medical researchers interested in ascertaining whether wild mammal populations serve as the reservoir of human diseases such as Yellow Fever and St. Louis Encephalitis. One position and \$33,000 are requested to hire a mammalogist to carry out these studies.

An additional amount of \$50,000 is requested to compensate for the higher price of goods and services at STRI associated with its particular location in Panama. A projection by the Rates and Analysis Branch of the Panama Canal Company forecasts an average increase of 12 percent in FY 1978 over FY 1977 for primary commodities. The requested increase would be used to keep pace with the higher costs of supplies, services, equipment, utilities, and essential travel for scientists related to their research tasks.

RADIATION BIOLOGY LABORATORY

1976 Actual.....\$1,550,000
 T.Q. Actual.....\$ 507,000
 1977 Estimate.....\$1,895,000
 1978 Estimate.....\$1,926,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	<u>49</u>	<u>0</u>	<u>49</u>
11 Personnel Compensation.....	879	13	892
12 Personnel Benefits.....	84	1	85
21 Travel & Trans. of Persons..	11	9	20
22 Transportation of Things....	5		5
23 Rent, Comm. & Utilities.....	532	8	540
24 Printing and Reproduction...	15		15
25 Other Services.....	39		39
26 Supplies and Materials.....	105		105
31 Equipment.....	<u>225</u>		<u>225</u>
TOTAL	<u>1,895</u>	<u>31</u>	<u>1,926</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		14	
Program Funds.....		17	

ABSTRACT - The Radiation Biology Laboratory (RBL) studies the influences of environmental factors--light, temperature, humidity, and atmospheric content--on biological systems in order to understand their growth and development. There is a continuing increase in concern about the environment and in requests for the Laboratory's data that is derived from ongoing programs. For FY 1978, a program increase of \$17,000 is requested to fund increased travel and utilities costs. The increase in travel will permit members of the staff involved in solar energy to attend major scientific meetings, and the increased cost of utilities is associated with expanded laboratory operations. Necessary pay in the amount of \$14,000 is sought for existing staff.

PROGRAM - Light is the key controlling environmental factor for development and growth of biological systems. Storage of solar radiation as chemical energy in photosynthesis is basic for all life on earth. The use of this energy is regulated by subtle, changing signals of light quality, duration, and intensity. A primary objective of the Radiation Biology Laboratory is to explain the influences of the various factors in the environment--light, temperature, humidity, and atmospheric content--on growth and development and to characterize the molecular mechanisms through which these signals operate.

This aim is accomplished by studying these environmental influences on plant growth and development in the laboratory under controlled conditions using biochemical, biophysical, and physiological techniques and then verifying the importance of these processes in nature by monitoring the natural, changing environment. An example of spinoff value from these measurements is the collection of solar insolation data necessary for calculating the feasibility and requirements for solar collectors used to provide an alternate source of energy. Such programs of research by their very nature are long-term and require the concerted team efforts of many scientific disciplines. Disciplines represented at RBL include physiology, cytology, biochemistry, biophysics, physics, engineering, electron microscopy, and morphology.

The research of the Laboratory consists of three principal areas: (1) regulatory biology, (2) environmental biology, and (3) carbon-14 dating. Since its inception in 1928, the Laboratory has pioneered research into the influences on growth of the color quality of visible and near visible light such as ultraviolet. The present experimental program is of greater scope than in any other single laboratory in the world. The Laboratory has been credited with major contributions in the field of photobiology, several first achievements in action spectroscopy, and the development of primary standards for the measurement of solar energy.

Major accomplishments in FY 1976 include the following:

1. Carbon dating of new finds approximately 19,000 years old at Meadowcroft, Pennsylvania, the recently discovered site of earliest human occupation in eastern North America.
2. Identification of a pigment in algae that is a vital link in the process of energy transfer for photosynthesis.
3. Discovery and partial identification of a growth substance in the fungus Phycomyces that controls cell branching.
4. Measurements of the carbon assimilated by photosynthesis in salt marsh communities, indicating that an excess is produced to provide food for fauna in adjacent estuarine communities.
5. Design and construction of scanning radiometers for measuring and monitoring ultraviolet erythema (sunburn) energy, and accumulation of one year's data, representing the first quantitative data ever recorded at the earth's surface for this part of the sun's spectrum.
6. Determination of cycle of 27-30 days for fluctuations in thickness of the ozone layer calculated from measured values of ultraviolet from the sun reaching the earth's surface during the period from November, 1975 to February, 1976.

JUSTIFICATION OF \$17,000 INCREASE:

Research - Direct, face to face communications between scientists is an important stimulus for scientists who work in laboratories isolated from colleges and universities. Exposure to the perspectives and new concepts gained from personal contact with peers working in the field elsewhere is invaluable for creative work. Currently 14 senior scientists are on the staff of RBL. Increased travel costs (both per diem and transportation) and budget restrictions have limited travel to important scientific meetings. Funds in the amount of \$9,000 are requested to allow senior staff scientists to attend scholarly meetings such as an international congress on solar energy research to be held in India where four members of RBL's staff have been asked to read papers.

Buildings Management - Additional sophisticated equipment will be installed in the environmentally controlled plant growing facility to establish and maintain precise environmental conditions for a controlled laboratory. This equipment will result in increased utility bills. Assuming that rate increases between FY 1977 and FY 1978 remain comparable to those presently occurring, an additional \$8,000 will be required to cover the additional costs of utilities usage at RBL.

OFFICE OF INTERNATIONAL PROGRAMS

1976 Actual.....\$281,000
T.Q. Actual.....\$ 63,000
1977 Estimate.....\$251,000
1978 Estimate.....\$254,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	<u>11</u>	<u>0</u>	<u>11</u>
11 Personnel Compensation.....	192	3	195
12 Personnel Benefits.....	18		18
21 Travel & Trans. of Persons...	5		5
23 Rent, Comm. & Utilities.....	4		4
24 Printing and Reproduction....	1		1
25 Other Services.....	27		27
26 Supplies and Materials.....	3		3
31 Equipment.....	<u>1</u>		<u>1</u>
TOTAL	<u>251</u>	<u>3</u>	<u>254</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		3	
Program Funds.....		0	

ABSTRACT - The Office of International Programs oversees the Smithsonian Foreign Currency Program and the International Liaison Section. No program increase is sought for FY 1978. Necessary pay in the amount of \$3,000 is sought for existing staff.

PROGRAM - The functions of administering the Smithsonian Foreign Currency Program and the International Liaison Section are performed in the Office of International Programs.

The Smithsonian Foreign Currency Program supports museum programs, scientific, and cultural research, and related educational activities in a number of countries where the United States owns local currencies in "excess" of its needs as determined by the Treasury Department. Institutions in 30 states and the District of Columbia have benefited from the Program. An appropriation of \$4,500,000 in "excess" foreign currencies is requested for FY 1978. This amount includes \$3,500,000 for research projects and \$1,000,000 for the last of four contributions to Egypt for the preservation of the monuments on the Island of Philae.

The Smithsonian proposes to make the United States contribution for the salvage of the Philae monuments available to the government of Egypt in FY 1978 through a grant to the American Research Center in Egypt, a consortium of United States institutions of higher learning. The campaign to safeguard the monuments of Nubia, of which the Philae program is a part, was initiated and is managed by the government of Egypt and has always been fully under its direction.

The International Liaison Section facilitates the activities abroad of all of the Institution's bureaus. Responsibilities include coordination of activities with the Department of State and foreign governments, including passport and visa services for Smithsonian staff and permits for research and for the import and export of research equipment and specimens.

CHESAPEAKE BAY CENTER FOR ENVIRONMENTAL STUDIES

1976 Actual.....\$516,000
 T.Q. Actual.....\$137,000
 1977 Estimate.....\$598,000
 1978 Estimate.....\$607,000

(Dollars in thousands)	<u>Base FY 1977</u>	<u>Increase Requested</u>	<u>Est. FY 1978</u>
Number of Permanent Positions..	<u>21</u>	<u>0</u>	<u>21</u>
11 Personnel Compensation.....	392	8	400
12 Personnel Benefits.....	38	1	39
21 Travel & Trans. of Persons...	8		8
23 Rent, Comm. & Utilities.....	42		42
24 Printing and Reproduction....	5		5
25 Other Services.....	30		30
26 Supplies and Materials.....	40		40
31 Equipment.....	<u>43</u>		<u>43</u>
TOTAL	<u>598</u>	<u>9</u>	<u>607</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		9	
Program Funds.....		<u>0</u>	

ABSTRACT - The Chesapeake Bay Center for Environmental Studies is a natural area for research on the ecological properties of estuaries and their watersheds and for use in creating public awareness and understanding of these ecological systems as they are affected by human disturbance. No program increase is sought for FY 1978. Necessary pay in the amount of \$9,000 is sought for existing staff.

PROGRAM - The Center is a 2,600 acre area located on the Chesapeake Bay seven miles south of Annapolis, Maryland. It was established in 1965 for the purpose of creating scientific and education programs in the environmental sciences leading to a more complete understanding of estuarine and watershed systems. The development of these programs was made possible by the acquisition of a land-water unit large enough to include a full range of forests, marshes, fields, and agricultural areas. Taken together, these form the mosaic of land uses characteristic of the mid-Atlantic region since the early 1600's. The area is ideal for study of the results of man's past and present activities as vital components of interacting physical and biological systems. Thus, the Center provides a living museum of contemporary and historical significance, a primary resource for teaching and research on complex living systems. It is the largest facility in the nation available for the study of land-water (estuarine) relationships.

The Center's Research Program is being conducted in conjunction with Federal agencies, universities, and private foundations and is a long-term effort to understand the influence of man's activities on terrestrial and estuarine ecosystems. Terrestrial research involves comparing the ecological properties of mature forests, old fields, agricultural lands, and residential areas to determine how these land uses affect the amount and composition of runoff into marshes and estuarine waters. These studies are aimed at assessing the effects of land use on water quality and are supplemented by a study of the ways in which historical changes in land use since the time of colonial settlement have affected present-day plant and animal communities. The Center's Research Program is also analyzing the water runoff from nearly nine square miles of the Rhode River watershed. Investigators are measuring the nutrient, bacteria, sediment, and pesticide composition of this runoff and estimating effects on submerged aquatic vegetation, marsh communities, and estuarine organisms such as fish and shellfish. This work includes determining the value of tidal marshes as spawning and nursery areas

for young fish and in serving to trap sediments and recycle nutrients received from land runoff. Scientists at the Center are also investigating the relative importance of bacteria in using nutrients in the estuary and determining how the rich bottom sediments act to release accumulated nutrients into the water column at certain times of the year. The availability of these findings and the acquisition of long-term data on environmental relationships has provided a unique setting for environmental research. As a result, a number of Federal agencies are sponsoring studies at the Center on topics related to their own missions.

The Center's education efforts are aimed at improving the quality and effectiveness of outdoor learning experiences and conveying the Center's research findings to the general public and to interested local, state, and Federal agencies. Present activities include designing education activities and materials which illustrate basic environmental concepts and encourage individual or group involvement in environmental problem-solving. Teacher-led tours at the Center are being carried out to reinforce science concepts taught in the classroom. Staff at the Center is presently developing self-learning materials which teach ecological relationships by using everyday settings. In FY 1977, an instructional booklet will be produced for this purpose using a conventional suburban lawn as a learning device. The Center conducts a variety of formal education programs including a Work/Learn Program for college students; research opportunities for pre- and postdoctoral students; and a science education program for gifted high school students. Finally, the Center offers technical assistance, workshops, and seminars for citizens' organizations in order to explain the significance of its Research Program for environmental planning and management. In this regard, the Center recently published a brochure describing the effect of land use on water quality which is being widely used by individuals and organizations in the water quality management programs of the Environmental Protection Agency.

NATIONAL AIR AND SPACE MUSEUM

1976 Actual.....\$5,634,000
T.Q. Actual.....\$1,052,000
1977 Estimate.....\$6,108,000
1978 Estimate.....\$5,786,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	230	0	230
11 Personnel Compensation.....	3,354	67	3,421
12 Personnel Benefits.....	322	6	328
21 Travel & Trans. of Persons..	18		18
22 Transportation of Things....	32		32
23 Rent, Comm. & Utilities.....	35		35
24 Printing and Reproduction...	133		133
25 Other Services.....	1,235	-150	1,085
26 Supplies and Materials.....	444	-125	319
31 Equipment.....	535	-120	415
TOTAL	6,108	-322	5,786
<u>Analysis of Increase</u>			
Necessary Pay.....		73	
Program Funds.....		0	
Nonrecurring Funds.....		-395	

ABSTRACT - The National Air and Space Museum (NASM) was created by Congress to memorialize the development of aviation and space flight; collect, preserve, and display aeronautical and space flight artifacts of historical significance; and serve as a repository for documentary and artistic materials related to air and space. A program decrease of \$395,000 is recommended in FY 1978, reflecting savings in exhibit activities following the extraordinarily favorable public reaction to existing displays in the new Museum. An amount of \$73,000 is sought for necessary pay for existing staff.

PROGRAM - The new National Air and Space Museum was opened to the public on July 1, 1976. The 22 exhibit galleries displaying one of the finest and most comprehensive collections of historical aircraft and spacecraft and the two performance centers--the 70Xmm film theater and 70-foot domed spacearium--have been enthusiastically received by the general public, the communications media, and aviation and space enthusiasts alike. In the first six months, five million people have visited the Museum, and over nine million visitors are anticipated in FY 1977.

In January, 1977, the Museum also opened to the public two hangar-like buildings at Silver Hill, Maryland, for the display of air and spacecraft, engines, propellers, models, and other items that could not be exhibited in the new building. In addition, visitors will be able to walk through a section of a third building for a behind-the-scenes look at ongoing restoration. Of the 265 aircraft in the collection, 65 are on exhibit on the Mall and 40 are on display at Silver Hill. In FY 1978, it is planned that one additional Silver Hill building will be opened to the public.

In an attempt to learn more about the nature of the audience that is attracted to the Museum, a series of studies designed to measure public response has been initiated. The visitors' reactions to the Museum as an entity will be explored--what is and is not of interest; how much is understood of the basic concepts of flight technology presented in the exhibits; is the information too technical or the quantity too great, etc. A study will also measure the audience responsiveness to individual

exhibits and compare the effectiveness of different approaches and techniques in communicating with the viewer. The results of these studies will assist the Museum staff in planning the exhibits program over the next five years.

The preservation and restoration of major artifacts will continue in FY 1978 with 4 restorations and 20 preservations scheduled. Two artifacts that will be restored are the Albatros D-5, a German WWI fighter flown by Von Richthofen, and the Langley Aerodrome, one of the first major attempts to fly a power driven aircraft. The work on these two aircraft will begin this year. Also to be restored in FY 1978 is the Curtiss XP-55, a unique experimental fighter plane; the Folke Wulfe 190, a famous German fighter; the Spad XIII, a WWI fighter; and the Pitcairn Cierua Autogiro, the first American autogiro. Work on the latter two aircraft will not be completed until FY 1979.

As part of its education program, the Museum will host workshops in the fall, winter, and spring for area educators. The purpose of the workshops will be to update techniques employed in teaching aerospace concepts in the classroom and to discuss ways in which maximum benefits can be derived from student visits to the Museum. Beginning in FY 1978, summer workshops will be held for educators from outside the Washington area as well. The training of sufficient numbers of persons to maintain a level of 275 volunteers is an ongoing requirement. These volunteers, who serve as docents, museum rovers, and museum aides, provide verbal and written information to visitors and guide school classes and other groups through the Museum.

The professional staff will continue with the research and publication program started in FY 1977. Publications in FY 1978 resulting from staff research will cover such topics as: History of the Dryden Flight Research Center; History of Relativity, Cosmology, and Astrophysics; the Effect of McCook Field on American Aviation; U.S. Women Fliers, 1910-1918; U.S. Women Fliers, 1919-1928; and International Astronautical Movement, 1920-1940.

EXPLANATION OF \$395,000 DECREASE (Exhibitions) - In preparation for the opening of the Museum, Fiscal Years 1975 and 1976 resources were devoted to planning, designing, and fabricating exhibits. It was planned that approximately 50 percent of the exhibit space would contain long-term core exhibit units when the building opened. The remaining space was to be filled with interim displays, such as labeled aircraft and spacecraft which would be replaced with core exhibits in subsequent years.

The overwhelmingly favorable response to the Museum has led to the reevaluation of these exhibits plans. In contrast to earlier estimates, it is now projected that some 70 percent of the exhibit units are essentially of core status. Two exhibits, the temporary exhibits hall and the Space Hall, originally were scheduled to be changed in FY 1977. Because of the popularity of the aircraft on display, however, they will be left intact. Such savings in exhibit production costs being experienced this year are expected to continue in FY 1978; therefore, a reduction of \$395,000 in the NASM exhibits base is recommended.

NATIONAL ZOOLOGICAL PARK

1976 Actual.....\$6,139,000
T.Q. Actual.....\$1,663,000
1977 Estimate.....\$6,982,000
1978 Estimate.....\$7,780,000

(Dollars in thousands)	<u>Base FY 1977</u>	<u>Increase Requested</u>	<u>Est. FY 1978</u>
Number of Permanent Positions..	<u>305</u>	<u>19</u>	<u>324</u>
11 Personnel Compensation.....	5,117	381	5,498
12 Personnel Benefits.....	491	37	528
21 Travel & Trans. of Persons..	25		25
22 Transportation of Things....	9		9
23 Rent, Comm. & Utilities.....	303	181	484
24 Printing and Reproduction...	20	4	24
25 Other Services.....	302	21	323
26 Supplies and Materials.....	543	93	636
31 Equipment.....	141	81	222
Acquisitions.....	29		29
42 Insur. Claims & Indem.....	<u>2</u>		<u>2</u>
TOTAL	<u>6,982</u>	<u>798</u>	<u>7,780</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		98	
Program Funds.....		700	

ABSTRACT - The National Zoological Park exhibits a large and varied animal collection; serves the information and education needs of the public; and conducts programs of research, animal health, and conservation on 150 acres in Rock Creek Valley and some 3,000 acres near Front Royal, Virginia. For FY 1978, an additional 19 permanent positions and \$700,000 are requested to enable the Zoo to maintain new facilities in Rock Creek and Front Royal and to provide adequately for the health and well-being of the animal collections. An amount of \$98,000 is requested for necessary pay.

PROGRAM - In 1890, Congress established the National Zoological Park for the "advancement of science and the instruction and recreation of the people." To accomplish these purposes, the Zoo exhibits a great and varied collection--over 2,000 animals representing more than 500 species. It maintains information, education, and visitor service programs for the public from all over the United States, with special emphasis on school groups, including handicapped children. In addition, the Zoo staff conducts zoological and biomedical research for the increased understanding, preservation, and well-being of valued exotic animals in captivity. Learning and resources are shared with many other American zoos in a national effort to preserve exotic species irreplaceable in the wild. As part of this effort the Zoo last year produced over 40 publications, provided training to 20 advanced students in zoology, medicine, and animal management; and hosted workshops and seminars on critical problems in zoo management.

The Zoo has two locations; exhibition and education functions are centered in Rock Creek Valley while breeding and conservation activities are located on about 3,000 acres in Front Royal, Virginia. By FY 1978, the rebuilding of the Zoo's Rock Creek facilities will be well advanced. Each new facility has been designed to allow the animals the greatest opportunity possible for natural movement and expression as well as to offer visitors improved opportunities for education and enjoyment. The new facilities have received special recognition by knowledgeable and critical observers.

The new Lion-Tiger Facility has been selected as an outstanding example of Federally sponsored architecture. The American Association of Zoological Parks and Aquariums voted the National Zoo three "outstanding in class" awards at its 1976 conference; and the new film "Big Cats" being shown as part of the Lion and Tiger exhibit at the National Zoo, won a Golden Eagle Cinematography Award. The new graphic designs, attractive directional aids to visitors, have also been widely and highly acclaimed.

To maintain the recently attained progress in animal care and public education, the Zoo must now be responsibly attentive to the management of the new exhibit and support facilities in Rock Creek Park and the Front Royal Conservation and Research Center. In FY 1978, no new programs will be initiated. Instead, all efforts will be directed toward consolidating recent gains and effectively operating and maintaining the two-fold increase in building space.

JUSTIFICATION OF \$700,000 INCREASE:

New Facilities--Rock Creek - In 1978, all the Beaver Valley projects (including exhibits for the beavers, otters, seals and sea lions, some bears, and wolves) will be completed. The General Services Building will be open and the Education Building and Bear Exhibits will be in their first full year of operation. The new Lion-Tiger Facility will also be in full use.

The new buildings of the National Zoo are larger and more mechanically complex than the ones they replace. Between 1974 and 1978, the total enclosed floor space within the National Zoo will have grown from 175,000 square feet to 425,000 square feet. The new Lion-Tiger Facility is three times the size of the old. The new Bear Lines will add 50,000 square feet; the Education Building, 46,000 square feet; and the General Services Building, 91,000 square feet.

Recognizing that the survival and well-being of zoo animals are totally dependent on their artificially created environments, complex mechanical and electrical systems have been installed as life-preserving features in the new facilities. Essential mechanical systems such as sprinklers, smoke detectors, water filters, humidifiers, airconditioners, sewage and air exhaust systems have increased sixfold. In the Lion-Tiger Facility, for example, 41 systems are working where four were present in the old facility. Airconditioning capacity has expanded from 100 tons in FY 1974 to 676 tons in FY 1976; and single thermostat steam radiator controls have given way to multi-zone controls with electronic/pneumatic monitors. When practical, sensor instrumentation is being installed to allow remote monitoring of equipment; however, life-support demands of priceless animals require personal inspection on a regular basis. Only adequate preventative maintenance and effective operation and monitoring of such mechanical systems by a skilled staff can ensure proper animal care and well-being as well as the comfort of Zoo visitors. At present, 56 skilled crafts workers are on-board. An additional 9 skilled crafts people (\$135,000) are requested in FY 1978. These 9 positions represent only a 16 percent increase in staff to serve well over a 100 percent increase in space. Management actions such as the abolishment of 12 senior administrative, research, and managerial positions and their replacement with lower grade, maintenance positions have made this small increase possible.

An amount of \$50,000 is requested to fund the cost of cleaning the newly completed space. These funds will allow the employment of 7 temporary employees to supplement the present workforce during the summer season and peak weekend period. Existing permanent staff will cover the added space during the off-season.

Energy costs to heat and cool these buildings at today's rates will require an additional \$156,000. Water treatment chemicals for the many moats and ponds, live plant/tree replacements, parts, electronic equipment maintenance contracts, cleaning supplies, painting, and other materials will cost \$40,000. A further \$60,000 will be

required for the purchase of equipment to meet changed needs of the new facilities and landscape. For example, asphalt rollers are needed to maintain the many new trails and a small crane is needed to lift animals and equipment over moats. The funds also will be used to permit replacement of tractors, waste removal equipment, sweepers, and hauling vehicles.

By FY 1978, the physical spaces under the animal keeper's responsibility will have been greatly enlarged. For example, the new Bear Lines will be eight times larger than the previous facilities and located in three separated areas as opposed to today's single area. Equally important, the responsibilities assigned to animal keepers are becoming increasingly labor-intensive. The keepers are involved far more in determining successful habitation, reproduction, and health needs for animals living in captivity, and spend an increasing amount of time observing behavior and animal interrelationships, recording findings, developing nutritional improvements, studying related reports and literature, and participating in habitat and exhibit presentation. New animals, more area, more educational service, and greater demands require 4 additional full-time permanent keepers (\$44,000) and 4 temporary keepers (\$21,000) for the summer months. These permanent positions will increase the animal management staff from 59 to 63. An amount of \$71,000 is required for the purchase of animal food; cleaning supplies; necessary items of equipment for food preparation at new locations; in-cage life-preserving equipment, such as incubation chambers; equipment to replace items worn and completely depreciated; and film, display apparatus, and other materials necessary for production of effective animal exhibits.

Front Royal Conservation and Research Center - Established in FY 1975, the Front Royal Conservation and Research Center is now a fully functioning center of 3,150 acres of woodlands, meadows, animal enclosures, and support complexes, devoted to the conduct of breeding and research essential to the survival of rare and endangered species. In addition to furnishing the Zoo's total requirement for hay and alfalfa, the Center has helped reduce the cost of the Master Plan at Rock Creek by more than \$15,000,000 through relocation of breeding herds to Front Royal where they can be accommodated with less expensive facilities than at Rock Creek. By 1978, the Center will be home for over 200 animals, and some 20 long-term breeding programs on endangered or threatened species will be underway. Cooperative agreements with other zoos already are in effect, resulting in pooled herds of the rarest animals, improving the chances of survival for those species.

In FY 1978, 4 keepers (\$44,000) are required to tend the growing collection at Front Royal, and 2 maintenance mechanics (\$26,000) must be employed to protect the property from disrepair. These 6 workers will join the 20 now comprising the Center's staff.

Funds in the amount of \$53,000 are required for such items and services as tractor repairs, supplies, medicines, utilities, rental of farm equipment, parts, research materials, and transportation of animals.

CENTER FOR THE STUDY OF MAN

1976 Actual.....\$355,000
 T.Q. Actual.....\$145,000
 1977 Estimate.....\$377,000
 1978 Estimate.....\$567,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	13	2	15
11 Personnel Compensation.....	279	128	407
12 Personnel Benefits.....	27	12	39
21 Travel & Trans. of Persons...	10	4	14
22 Transportation of Things.....		3	3
23 Rent, Comm. & Utilities.....	7	1	8
24 Printing and Reproduction....	3		3
25 Other Services.....	46	33	79
26 Supplies and Materials.....	3	6	9
31 Equipment.....	2	3	5
TOTAL	377	190	567
<u>Analysis of Increase</u>			
Necessary Pay.....		5	
Program Funds.....		185	

ABSTRACT- The Center for the Study of Man's (CSM) anthropological and human science programs include: the continued development of the encyclopedia of North American Indians; development of an anthropological film study center; conduct of an immigration and ethnic studies program; sponsorship of an urgent anthropological program; and the coordination of international anthropological efforts on current social problems. In FY 1978, an amount of \$95,000 (for 5 term appointments and other needs) are requested for further research and collections management support for the National Anthropological Film Center, and 2 positions and \$90,000 are proposed to foster the Immigration and Ethnic Studies Program. Funding of \$5,000 is required for necessary pay for existing staff.

PROGRAM - The CSM coordinates research and development on a series of important anthropological and human science programs. The American Indian Program continues to be devoted to the development of the 20-volume encyclopedic Handbook of North American Indians. Volumes on the California Indians and Indians of the Northeast have been delivered for printing and are scheduled for release in 1977. Two separate volumes on the Southwest Indians are planned for publication in 1978. When completed this work will serve as an authoritative resource for Native Americans as well as for scholars.

The American Indian Program also provides scholarly educational materials to individuals, schools, and Indian communities. It helps coordinate educational intercommunication among Indians themselves, with scholars, and with appropriate Government and private agencies. The Center has worked closely with task forces of the new American Indian Policy Review Commission established by Public Law 93-580. The gaps in knowledge of North American Indian cultures have become more evident as work on the Handbook has progressed. There is a real urgency to fill these wherever possible.

The National Anthropological Film Center (NAFC) was established to take fuller advantage of the scholarly potential of film as a tool of inquiry into the vanishing and changing ways of life and cultures of the world. Its purpose is to facilitate the study, documentation, collection, and preservation of visual data records of the

varieties of patterns of human behavior and response which have evolved in the world. Since its inception, the NAFC has collaborated with individuals and institutions in California, Ohio, Massachusetts, Wisconsin, Washington, New Hampshire, Indiana, Illinois, New Mexico, and New York, as well as abroad to document vanishing ways of life and to collect film that is in immediate danger of destruction.

Special attention is being given to the few remaining small, isolated cultural groups of the world which have evolved independently over thousands of years, particularly those which represent rapidly vanishing, unique expressions of human organization and behavior. Not only will the Center preserve visual records as a permanent scholarly resource but it will also provide cultural information to peoples who have little written history, thereby helping to meet their need for information related to their own heritage. In order to make this possible, a research film library will be developed. This library will contain prints for review, study, and scholarly assembly, leaving original films undamaged for later reproduction.

Pilot projects have demonstrated the importance of visual records in understanding the range of human possibility. For example, research film study of a Brazilian Indian tribe has revealed a kind of social organization in which expressions of human individuality contribute directly to group solidarity. Because this situation is distinctly different from any society yet studied or from the condition prevailing in Western societies, it has significant implications for the nature of human patterning. Studies of tribes in Melanesia show child handling practices which transmit an ability to handle safely objects which are normally considered dangerous for children. The existence of such competence in children has broad theoretical and developmental implications in the understanding of basic human potential.

Though only in existence a short time, the Film Center has acquired a number of important bodies of ethnographic film. It has obtained 125,000 feet of film from Afghanistan, Bolivia, and Kenya; 35,000 on the New Hebrides, 75,000 on Papua New Guinea; 42,000 on the Huichol Indians of Mexico; 84,000 on the Canela Indians of Brazil; 2,400 on Cambodia and Thailand; and 95,000 on the Pashtoon Nomads of Afghanistan. It also has 95,600 feet on the U.S. Trust Territory of the Pacific Islands; 29,500 on the traditional Polynesian culture of the Cook Islands; 16,700 on contemporary American family life; and 28,000 on a Vedic ritual in India.

In addition, the NAFC has received from around the world 114 proposals for urgent film documentation projects of cultures which are rapidly disappearing. Expressions of interest and invitations have come from heads of state, national ministers, and chancellors of national academies. Interest is particularly strong in developing nations.

In an effort to locate and identify existing anthropological films better and to help establish priorities for urgent research filming, a central National Union Catalogue of Anthropological Film is being developed. To date, a core listing of over 5,000 entries has been accumulated.

The Research Institute on Immigration and Ethnic Studies (RIIES) is concerned with the peopling of America as an ongoing process. The overall broad missions of RIIES are to participate in, stimulate, facilitate, and disseminate research on immigration to the United States since the passage of the new immigration law in 1965, as well as to provide consultation on these various phases. The Research Institute is primarily interested in understanding the new immigration as a part of the larger historical process of the peopling of the United States. Multi-disciplinary approaches are being applied to gain a more complete understanding of the new immigrants, their experiences, challenges, and impacts on the future of this society and the international community.

As part of the Smithsonian's Bicentennial observance, RIIES sponsored a three-day conference in November, 1976 on "The New Immigration: Implications for the United States and the International Community." The conference was the first in the country in

which a wide-range of academicians reported on the research they are doing to an audience composed largely of government experts in the areas of labor, diplomacy (consular, visa, and international aid programs), census and vital statistics, socio-economic indicators, immigration, archival, library, and museum materials; and international experts and scholars. The proceedings of these sessions are scheduled to be published in April, 1977.

The Urgent Anthropology Program identifies, publicizes, and finances by means of small awards, needed research in geographical areas that are undergoing rapid environmental change as a result of organization, improved communications, better transportation, and other factors. Its objective is to salvage and preserve information in selected rapidly changing areas before time and events eliminate opportunities to understand the cultures which existed there.

The Cross-Cultural Research Program coordinates the efforts of numerous anthropologists and other human scientists in developing new comparative information on contemporary world problems.

JUSTIFICATION OF \$185,000 INCREASE:

Research and Collections Management - Most of the separately-evolved cultures of the world, particularly those in once remote geographical areas, are now disappearing before their special or unique natures can be studied for their implications for modern society. The National Anthropological Film Center is being developed to avoid the loss of information associated with these cultures. To preserve the insights that independent ways of life can provide into the nature of human patterning, the NAFC is systematically preparing detailed permanent synchronized-sound film records of naturally occurring human behavior and development, and assembling and preserving these records as a scholarly resource.

To continue the important efforts in film documentation already undertaken by the Center, an amount of \$95,000 is requested for 5 term appointments and support funds to establish and maintain a vitally needed core staff to manage the requisite logistics, acquisitions, and preservation functions of the Center. A research filmmaker and a research assistant, two research film editors, and an administrative assistant (\$69,000) and \$26,000 for other support are required to prepare film documents from exposed raw film stock, synchronize magnetic sound track and film, organize annotations, and edit documentary films and reports in preparation for study and scholarly use. Although the NAFC continues to seek outside grant support, this minimal core staff is essential to provide support to collaborative accessioning and field research projects, organize and maintain catalogues and indices, and handle the sizeable correspondence connected with the Center's activities.

Research - The research area covered by the Research Institute on Immigration and Ethnic Studies has been neglected by modern social science. Prior to the establishment of RIIES in 1973, there had been no major studies of new immigrants for over 20 years. Consequently, there is presently very little knowledge of new immigrants from Central America and the Canal Zone, for example, despite the fact that they constitute a substantial portion of the migrants to this country. The resources requested for FY 1978 are crucial to enable RIIES to move ahead with its unique and valuable research program. The additional 2 positions (\$32,000) are designated for a research analyst who will develop material for publication and coordinate research between staff and research associates and a manuscript typist. An additional \$58,000 is requested to allow for the purchase of editorial and translation services, contract for field research, data collection, and consultation services, support current staff, and fund travel and other necessary items.

OFFICE OF THE ASSISTANT SECRETARY FOR HISTORY AND ART

1976 Actual.....\$231,000
 T.Q. Actual.....\$ 68,000
 1977 Estimate.....\$233,000
 1978 Estimate.....\$234,000

(Dollars in thousands)	<u>Base FY 1977</u>	<u>Increase Requested</u>	<u>Est. FY 1978</u>
Number of Permanent Positions..	<u>8</u>	<u>0</u>	<u>8</u>
11 Personnel Compensation.....	200	1	201
12 Personnel Benefits.....	19		19
21 Travel & Trans. of Persons..	4		4
25 Other Services.....	4		4
26 Supplies and Materials.....	4		4
31 Equipment.....	<u>2</u>		<u>2</u>
TOTAL	<u>233</u>	<u>1</u>	<u>234</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		1	
Program Funds.....		0	

ABSTRACT - The Office of the Assistant Secretary for History and Art advises and assists the Secretary in planning, implementing, and reviewing the progress of Smithsonian history and art programs. Also included under this heading is the Joseph Henry Papers project. No program increase is sought for FY 1978. An amount of \$1,000 is requested for necessary pay for current staff.

PROGRAM - I. Immediate Office: With a base of 4 positions and \$129,000, the Office of the Assistant Secretary for History and Art advises and assists the Secretary in planning, implementing, coordinating, and reviewing the progress of the Smithsonian history and art bureaus and offices. The bureaus and offices reporting directly to the Assistant Secretary for History and Art are the Archives of American Art, Cooper-Hewitt Museum of Decorative Arts and Design, Freer Gallery of Art, Hirshhorn Museum and Sculpture Garden, National Collection of Fine Arts, National Museum of History and Technology, National Portrait Gallery, Office of Academic Studies, Office of American Studies and its Folklife Unit, and the Joseph Henry Papers.

II. Joseph Henry Papers: The remainder of the resources identified for this Office, 4 positions and \$104,000 supports the Joseph Henry Papers project. In addition, 2 positions and microfilming and travel costs are supported by grants totalling approximately \$58,000 from the National Academy of Sciences, the National Historic Publications and Records Commission, and the National Endowment for the Humanities. The Editor of the Joseph Henry Papers and his staff have been gathering and preparing for publication the manuscripts of Joseph Henry (1797-1878), the pioneer American physicist and first Secretary of the Smithsonian Institution. Two volumes of the multi-volume letterpress series have been published by the Smithsonian Press, and the third volume will be substantially completed in FY 1977 and published in FY 1978. In addition, a special volume of Henry's public lectures will be edited and there will be further work on a supplementary microfilm publication. The Henry project has been endorsed by the National Historical Publications and Records Commission.

NATIONAL MUSEUM OF HISTORY AND TECHNOLOGY

1976 Actual.....\$5,451,000
 T.Q. Actual.....\$1,488,000
 1977 Estimate.....\$5,915,000
 1978 Estimate.....\$6,126,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	<u>268</u>	<u>5</u>	<u>273</u>
11 Personnel Compensation.....	4,763	103	4,866
12 Personnel Benefits.....	457	10	467
21 Travel & Trans. of Persons..	36	5	41
22 Transportation of Things....	25	15	40
23 Rent, Comm. & Utilities.....	30		30
24 Printing and Reproduction...	50	1	51
25 Other Services.....	262	35	297
26 Supplies and Materials.....	135	30	165
31 Equipment.....	57	12	69
Acquisitions for Collections	<u>100</u>		<u>100</u>
TOTAL	<u>5,915</u>	<u>211</u>	<u>6,126</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		61	
Program Funds.....		<u>150</u>	

ABSTRACT - The National Museum of History and Technology (NMHT) is the repository of the collections documenting the historical and technological achievements of the American people. It has an active research and publications program, and its exhibits are seen by several million visitors a year. The FY 1978 budget requests an additional 5 positions and \$150,000 to provide staff and support costs to maintain the "1876 Centennial" and "Nation of Nations" exhibitions when Bicentennial funds are depleted and to maintain these areas when new exhibits rotate in the future. An additional amount of \$61,000 is required for necessary pay for existing staff.

PROGRAM - The NMHT is responsible for the following major programs: (1) research, (2) collections acquisition, (3) collections management, (4) exhibitions and performances, (5) education and public orientation, (6) conservation, (7) printing and reproduction (research publications), and (8) buildings and facilities management.

The NMHT occupies a unique position among the great museums of the world. As the repository of the National Collections documenting the American civilization, the Museum has responsibility for over 16,000,000 objects related to all facets of the American experience. Each of these objects deserves the highest level of professional care and preservation and must be accessioned, conserved, and exhibited using the best techniques and professional abilities available.

Since opening in 1964, the NMHT has provided a variety and richness of public exhibitions seen by 73,000,000 visitors. The Museum received approximately 6,000,000 visitors in FY 1976 and it is expected that this figure will be equaled in FY 1977.

As a center for the scholarly study of the history of American material culture and the history of science and technology, this museum continues to support and encourage basic research and publication in its many subject fields, ranging from early exploration to studies of contemporary American culture. Education and public orientation activities include guided tours, demonstrations of trade and craft skills,

lectures, and films. Programs and facilities for school children and for the handicapped are receiving special attention.

In FY 1976, the exhibit emphasis of the Museum was applied to the two large Bicentennial exhibits, "A Nation of Nations" and "1876: A Centennial Exhibition." "Two Hundred Years of American Banking," an exhibit funded by outside sources, also opened in FY 1976. Other smaller, but significant, exhibitions which opened during FY 1976 were "American Presidential China," "The Royal Brass Foundry, 1770-1786," "Belgian Gunmaking and American History," "Columbus and His Time," and "The Anatomical Drawings of Leonardo da Vinci."

During FY 1977, the NMHT exhibits effort will be devoted primarily to the redesign and completion of permanent core exhibits such as the Hall of Military History. In progress is the "Hall of American Maritime Enterprise," funded jointly by the Museum and the maritime community. The Hall will celebrate the men, ships, and the institutions that made possible the growth of our nation from a beachhead on a new continent to a flourishing maritime power. An important segment of the Hall, the S/S Oak Engine Room, is currently under construction. A new Hall of American Science is now under consideration. Additionally, "Person to Person," an exhibition celebrating the 100th anniversary of the telephone and funded by outside sources, opened in December, 1976; an exhibit of a balloon frame house, portraying development of new building techniques during the mid-19th century, will be opened to the public in the spring of 1977; and "Atom Smashers," an exhibition describing the historical development of particle accelerators and detectors, is planned to open in the fall.

During FY 1976, a number of outstanding objects were acquired: three extremely rare engraved Amelung glass tumblers, circa 1786, representing fine glassware manufactured in 18th century America; personal belongings of George and Martha Washington; bloodletting artifacts used in America over several centuries; a Peter Hill clock, circa 1812, made by the earliest known black clockmaker in America; and an American crewelwork bed cover, a rare, 18th century textile artifact.

The NMHT plans to develop further its collections management program in the course of the next few years, with special emphasis on a uniform, museum-wide inventory of collections resulting in the computerization of some 16,000,000 specimens acquired before FY 1975.

JUSTIFICATION OF \$150,000 INCREASE (Exhibitions) - Because of their quality and popularity, the NMHT plans to retain the special exhibits "A Nation of Nations" and "1876 Centennial" well beyond the Bicentennial year. These two exhibits occupy some 90,000 square feet of floor space, 72,000 of which represent space altogether new to the Museum, principally, the exhibit galleries of the Arts and Industries Building. In addition, 23,000 square feet of floor space previously devoted to storage in the History and Technology Building will be converted to exhibit use during the course of FY 1977. These 95,000 square feet of new exhibits will require maintenance services including routine cleaning and dusting, equipment repair and replacement, periodic rotation of artifacts, and the like. The NMHT devotes approximately 15 staff-years of effort to maintain its 241,000 square feet of exhibit space. To manage the new space an increase of 5 positions (\$52,000) and support costs of \$98,000 is requested. This will provide for a manager and 4 museum aide positions. The 4 museum aide positions will be filled by Upward Mobility candidates, reflecting the Museum's commitment to the Institution's Upward Mobility Program.

NATIONAL COLLECTION OF FINE ARTS

1976 Actual.....\$2,281,000
 T.Q. Actual.....\$ 621,000
 1977 Estimate.....\$2,551,000
 1978 Estimate.....\$2,693,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	106	0	106
11 Personnel Compensation.....	1,732	34	1,766
12 Personnel Benefits.....	166	3	169
21 Travel & Trans. of Persons..	24		24
22 Transportation of Things....	93		93
23 Rent, Comm. & Utilities.....	20		20
24 Printing and Reproduction...	75	30	105
25 Other Services.....	190	25	215
26 Supplies and Materials.....	98		98
31 Equipment.....	3		3
Acquisitions for Collections	150	50	200
TOTAL	2,551	142	2,693
<u>Analysis of Increase</u>			
Necessary Pay.....		37	
Program Funds.....		105	

ABSTRACT - The National Collection of Fine Arts (NCFA), the oldest national collection of art, is devoted to the conservation, study, and presentation of American painting, sculpture, and graphic arts and, in the Renwick Gallery, American craft and design. In FY 1978, additional funds of \$105,000 are requested to meet the following requirements: (1) Collections Acquisition--\$50,000 to maintain a minimum acquisition program; (2) Conservation--\$25,000 for the rehabilitation of long neglected major works of art; and (3) Printing and Reproduction--\$30,000 to carry on the important program of publication at both the scholarly and popular levels. Necessary pay in the amount of \$37,000 is sought for the existing staff.

PROGRAM - The National Collection of Fine Arts is a major national center for collection, study, and presentation of American art. Its collection of over 17,000 works representing all aspects of some 200 years of American art serves as the basis for active programs of exhibition, research, and public education. In an area generally neglected in university programs, its publications have become basic texts in a reassessment of the art of America's past, and its exhibitions have opened up new channels of appreciation of artists of both the past and present. The Museum has maintained close contact with centers abroad and has encouraged the study of local art in many regions of the United States. Through the Renwick Gallery, it has promoted the study of American craft and design and provided galleries for the exhibition of arts and crafts from abroad.

During FY 1976, the NCFA presented a wide range of programs that examined various aspects of art in America. In total, some 19 exhibitions were produced in FY 1976 and the Transition Quarter. The Renwick Gallery exhibition, "Signs of Life: Symbols in the American City," dealt with the ways in which people relate to their domestic and urban environment, opening up new channels for thinking about design. Also at the Renwick (and later in New York) the exhibition, "Americas: Decorative Art in Latin America in the Era of the Revolution," brought together major treasures from Mexico and South America. The eight exhibitions comprising "America as Art,"

made up largely of rarely shown works, examined how American art has been identified with and related to changing concepts or ideals over the past 200 years. The widely acclaimed comprehensive exhibition of the works of Robert Rauschenberg which were displayed at the NCFA was one of the few major tributes to a living American artist during the Bicentennial year. The Rauschenberg exhibit also will be shown in New York, San Francisco, Chicago, and Buffalo. Other exhibits will be toured in the United States as well, and some have been shown abroad (for example, "Images of an Era: The American Poster, 1945-1975").

In addition, following its policy of studying regional backgrounds in art, the NCFA cooperated with the San Francisco Museum of Art in producing a major survey of art in California from the 1920's to the present to be shown in Washington in FY 1977.

"The Bicentennial Inventory of American Paintings Executed Before 1914", completed with the extraordinary cooperation of amateurs and professionals from all parts of the country, is now available as a reference resource for public use. The Inventory contains more than 160,000 works in its computerized listing. To facilitate its use by scholars, a guide to its holdings has also been published.

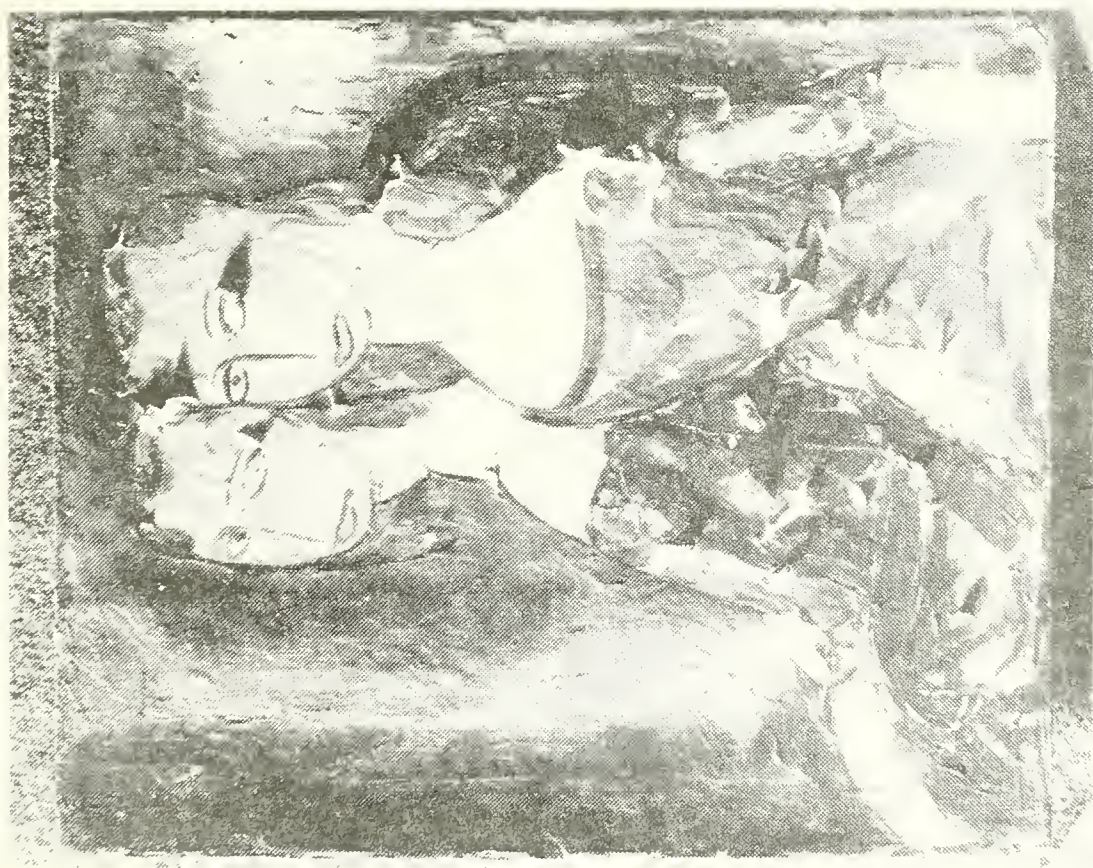
The NCFA has continued to expand its programs with school children at both elementary and senior levels and its programs for young scholars and museum apprentices. Many young professionals from the United States and other countries have learned methods of museum procedure and public education from the NCFA's programs.

JUSTIFICATION OF \$105,000 INCREASE:

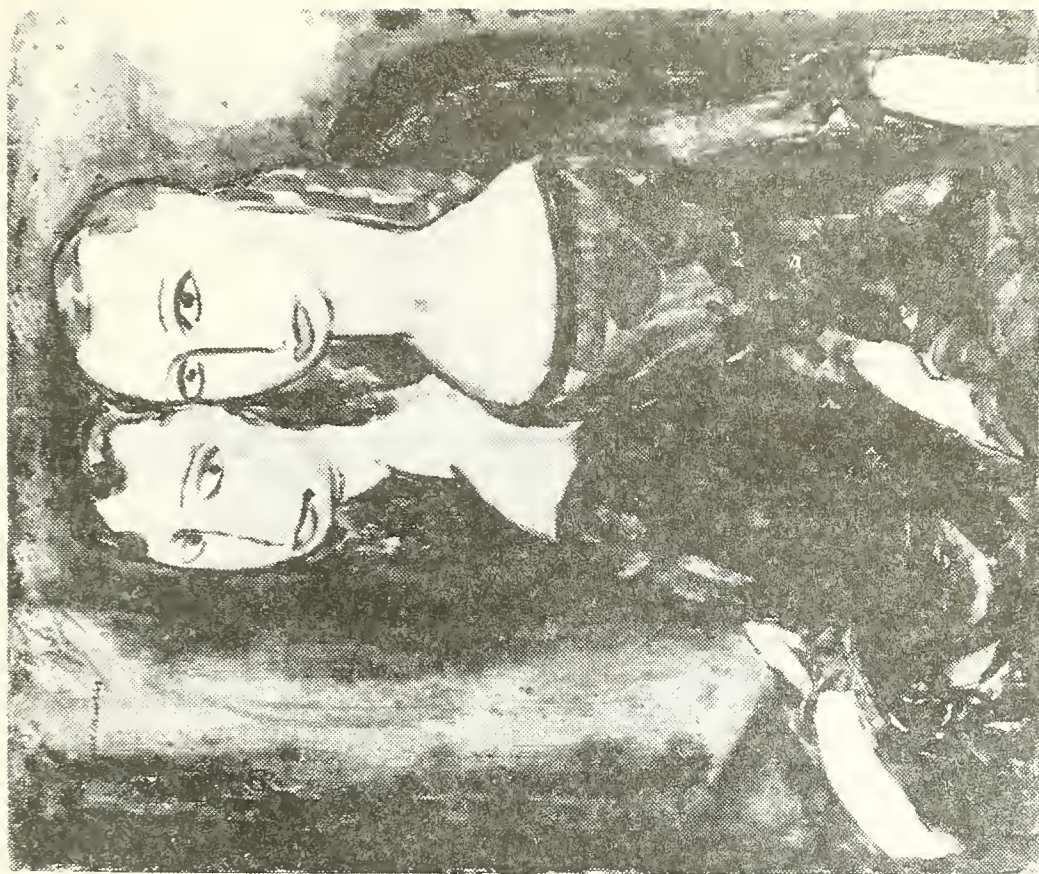
Collections Acquisition - Unlike many museums which are less inclined to study the full historical scope of art, the NCFA collects a broad spectrum of material. Its permanent collection strives to represent a cross section of American art of all periods and types, giving special attention to aspects of art that might be overlooked.

In FY 1977, the NCFA was able to purchase a major early Ralston Crawford, a monumental seascape by Alfred Bricher, an historically important Frederic Rothermel, and a large characteristic sculpture of Saul Baizerman. It also purchased a landscape by Samuel Lee, an almost forgotten painter of the 1830's in Cincinnati and New Orleans, and a painting by Thomas Doughty, one of the most highly prized early nineteenth century landscapists. However, acquisition funds were inadequate to obtain some works that should have come to the National Collections, most notably two important miniatures by Charles Willson Peale of 1776 and an unusually fine painting by Asher Brown Durand, a major landscape painter not represented by a landscape in the collection. Only 51 of the 129 paintings, 80 sculptures, and 603 graphics acquired during the Transition Quarter and the early months of FY 1977, were purchases. The rest were obtained through gifts. With its increasing role as a center for American art, however, the NCFA cannot depend fully on donors for its major acquisitions. It is important to acquire those works particularly suitable for the collection when they become available. Accordingly, a \$50,000 increase is requested to sustain the quality of the collection as a major repository of all aspects of American art.

Conservation - The conservation staff of the NCFA, which consists of three conservators, a technician, and a part-time aide, has the responsibility of overseeing the care and restoration of the Museum's extensive collection. Their duties include restoring works of art, as well as monitoring the galleries and storage areas to maintain proper environmental conditions, advising on the packing and handling of works of art, and working closely with curators on technical questions involving dating, authenticity, and previous restorations. The staff also advises individuals and government agencies in matters of conservation. Many of the NCFA's works cannot be placed on exhibition or lent to other institutions because of their poor physical



BEFORE TREATMENT



AFTER TREATMENT

NATIONAL COLLECTION OF FINE ARTS--CONSERVATION OF A. H. MAURER'S TWO WOMEN

condition. Although now stored in a way that will minimize further deterioration, the paintings and sculptures should be made available in proper condition to scholars and the public. Because much of the conservators' time has been devoted to the on-going programs, including preventive maintenance, progress has been slow with regard to restoring much of the collection. Over the last year, the paper conservator restored 109 works to a useful life (the collection has more than 11,000 works on paper, approximately 85 percent of which need restoration), and the two painting and sculpture conservators aided 149 works, 59 of which were in need of major treatment (the collection has over 6,000 paintings and sculptures, approximately 45 percent of which need restoration). Funds in the amount of \$25,000 are requested to obtain the services of trained individuals who will work with the conservators to reduce the existing backlog.

Printing and Reproduction - The NCFA's exhibitions have led to the publication of books of lasting educational value. Recent examples are the extensive America as Art, Robert Rauschenberg, and Americas: The Decorative Arts in Latin America in the Era of the Revolution. In all, the NCFA produces about 17 publications a year devoted to American art. These reach a wide public through distribution by the Government Printing Office and commercial distributors. More study aid material needs to be published for use in public schools to further programs carried on by the Museum. In addition, it is desirable for more of the NCFA's research efforts to be made available through independent publishing efforts since journals for the diffusion of scholarly material on American art are few and diminishing in number. Publication costs have risen substantially and are continuing to increase. Although gifts and donations will be solicited as in the past, additional Federal funds are needed to sustain a viable program. In FY 1977, some \$75,000 in Federal funds have been designated for printing and reproduction. An increase of \$30,000 is requested for FY 1978.

NATIONAL PORTRAIT GALLERY

1976 Actual.....\$1,693,000
T.Q. Actual.....\$ 497,000
1977 Estimate.....\$1,917,000
1978 Estimate.....\$2,015,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	75	0	75
11 Personnel Compensation.....	1,248	26	1,274
12 Personnel Benefits.....	120	2	122
21 Travel & Trans. of Persons...	19		19
22 Transportation of Things.....	18	20	38
23 Rent, Comm. & Utilities.....	15		15
24 Printing and Reproduction....	37		37
25 Other Services.....	112		112
26 Supplies and Materials.....	57		57
31 Equipment.....	41		41
Acquisitions for Collections	250	50	300
TOTAL	1,917	98	2,015
<u>Analysis of Increase</u>			
Necessary Pay.....		28	
Program Funds.....		70	

ABSTRACT - The National Portrait Gallery (NPG) was established by Act of Congress in 1962 (20 U.S.C. 75b) as a museum for the exhibition and study of portraits depicting men and women who have made significant contributions to the history, development, and culture of the people of the United States. For FY 1978, an increase of \$70,000 is requested for: (1) Collections Acquisition--\$50,000 to augment the purchase funds; and (2) Shipping--\$20,000 to meet higher shipping costs necessary to sustain the exhibition program. A further \$28,000 is needed for necessary pay for existing staff.

PROGRAM - The National Portrait Gallery is the only national museum that depicts the history of the United States primarily in terms of the men and women who made that history. The portraits of these individuals are crucial documents of historical evidence and bear strong witness to the roles these persons have played in the American experience.

The Gallery's activities include: (1) the expansion and care of its collections; (2) public education through display of these collections and specially organized temporary exhibitions; (3) the preparation and national distribution of scholarly and popular publications related to these exhibitions; and (4) the compilation of a definitive catalogue of American portraits, a unique information resource in the areas of American history and biography, art, and iconography.

In FY 1976, attendance at the Fine Arts and Portrait Galleries Building was 465,000, a 26 percent increase over FY 1975. It is projected that annual attendance will soon exceed the half-million mark, particularly in view of the recent opening of Gallery Place Metro Station and the F Street pedestrian plaza.

During 1976, 88 portraits were added to the permanent collection. Among the 59 purchased with Federal funds were an oil painting of Robert E. Lee by Edward Caledon Bruce, painted from life during the winter of 1864-65; a water-color self-portrait of Mary Cassatt, America's most outstanding woman artist; and a daguerreotype of President Martin Van Buren, one of the few remaining Chief Executives not hitherto represented in the permanent collection. This life image was the only

one in any medium available to the Gallery. Most notable among the 29 gifts (valued at approximately \$100,000) were a portrait of President Zachary Taylor by James R. Lambdin, two likenesses of Joel Barlow (a miniature by William Dunlap and a drawing by John Vanderlyn); and a previously unknown original photograph of Winslow Homer.

In July, 1976, the NPG had on view five major loan exhibitions, all accompanied by full-scale catalogues. The catalogue for the Gallery's principle Bicentennial show, "Abroad in America: Visitors to the New Nation, 1776-1914," was selected as the featured Bicentennial alternative for July 1976 by the Book-of-the-Month Club. Published by Addison-Wesley, 23,000 copies of the book have been distributed in the United States and abroad. Other exhibitions organized by NPG were: "Christian Gullager: Portrait Painter to Federal America," and "Wedgwood Portraits and the American Revolution." Two additional exhibitions, "The American Presidency in Political Cartoons: 1776-1976," and "The Spirit of Fact: The Daguerreotypes of Southworth and Hawes, 1843-1862," were assembled elsewhere and installed by Gallery staff. Several smaller exhibitions were mounted on such subjects as Custer's Last Stand, the Brook Farm Community, 20th Century American Composers, Thomas Hart Benton, and Mark Twain.

The building management staff supported the various activities of the National Portrait Gallery and the National Collection of Fine Arts, including over 800 museum-related programs and events conducted in the Fine Arts and Portrait Galleries Building and the Renwick Gallery.

JUSTIFICATION OF \$70,000 INCREASE:

Collections Acquisition - As the only Smithsonian museum established during the last decade without a permanent collection, it is incumbent on the NPG to develop a fund sufficient to acquire portraits of men and women representative of this nation's history. Although approximately two-thirds of NPG's nearly 1,000 portraits have been gifts, many important likenesses are available only through purchase. Moreover, NPG is increasingly unable to compete for certain of these for lack of funds. For example, NPG had to pass up the magnificent Houdon marble bust of Benjamin Franklin, which sold for \$300,000; and a James Peale painting of Washington and his generals at Yorktown recently brought \$350,000, more than triple the amount the Gallery could afford to bid. The \$50,000 additional requested for FY 1978 will be added to the acquisition fund base of \$250,000 to help the NPG keep pace with rising costs and begin to acquire portrait photographs as authorized by the Congress in 1976 (20 U.S.C. 75a). Many notable figures, such as Henry David Thoreau and Martin Van Buren, are represented only by photographs, the values of which also have increased substantially. For example, the daguerreotype of President Martin Van Buren was purchased in 1976 for \$18,000.

Shipping - NPG's loan exhibition efforts form a vital part of its overall exhibitions program. Shipping costs have more than tripled in the last two years, from \$11,000 in FY 1974 to \$38,000 in FY 1976. To enable the Gallery to maintain its program of loan exhibitions, an additional \$20,000 is required to defray shipping costs.

HIRSHHORN MUSEUM AND SCULPTURE GARDEN

1976 Actual.....\$1,559,000
T.Q. Actual.....\$ 440,000
1977 Estimate.....\$1,885,000
1978 Estimate.....\$1,958,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	83	0	83
11 Personnel Compensation.....	1,224	21	1,245
12 Personnel Benefits.....	117	2	119
21 Travel & Trans. of Persons..	12		12
22 Transportation of Things....	15	20	35
23 Rent, Comm. & Utilities.....	14		14
24 Printing and Reproduction...	40	5	45
25 Other Services.....	184	-25	159
26 Supplies and Materials.....	70		70
31 Equipment.....	60		60
Acquisitions for Collections	143	50	193
41 Grants.....	6		6
TOTAL	1,885	73	1,958
<u>Analysis of Increase</u>			
Necessary Pay.....		23	
Program Funds.....		50	

ABSTRACT - Established by Act of Congress (P.L. 89-788, November 7, 1966), the Hirshhorn Museum and Sculpture Garden (HMSG) maintains a balanced program of exhibitions; educational activities, including films and lectures; research; and curatorial and technical support, including conservation, registration, and publications in the field of modern art. In FY 1978, an increase of \$50,000 is requested to purchase works of art for the collections. An amount of \$23,000 also is sought for necessary pay for existing staff.

PROGRAM - The Hirshhorn Museum and Sculpture Garden is one of the few major museums of contemporary art in the country. It maintains a full range of activities including exhibitions, loans, and research, as well as acquisition, conservation, registration, and educational programs.

The Museum carries out a broad range of loan exhibitions. In FY 1976, these included: "The Sculpture and Drawings of Elie Nadelman"; "Artists, Authors, and Others: Drawings by David Levine"; and "The Golden Door: Artist-Immigrants of America, 1876-1976" (its Bicentennial exhibition). Exhibitions already opened or planned for FY 1977 include: "Hans Hofmann"; "Alfred Leslie"; "14 Canadians: A Critic's Choice"; "Thomas Eakins in The Hirshhorn Museum Collection"; and "Kenneth Noland Retrospective." Several of these were prepared in cooperation with such other major museums as the Whitney Museum of American Art (Nadelman); The Museum of Fine Arts, Houston (Hofmann); and The Museum of Fine Arts, Boston (Leslie). Exhibitions planned for FY 1978 include "Gregory Gillespie Retrospective" and "The Noble Buyer, John Quinn, Patron of The Avant-Garde."

Several important publications resulted from these exhibitions. For example, The Golden Door: Artist-Immigrants of America, 1876-1976 and 14 Canadians: A Critic's Choice have enjoyed wide circulation. For subsequent exhibitions, the catalogue depicting the work of Thomas Eakins' in the Museum collection will be a major contribution to scholarly information on this great American artist. The John Quinn

catalogue will throw fresh light on a still little known period of early twentieth century avant-garde history in the United States.

The Museum is also a major lender to other domestic and foreign institutions. Loans were made in FY 1976 and thus far in FY 1977 to museums in New York, Boston, Philadelphia, San Francisco, Indianapolis, Buffalo, and Los Angeles, as well as London, Paris, Rome, Zurich, Bonn, and some Eastern European countries.

Although in existence for a short time, the Hirshhorn Museum has been successful in establishing working relationships with major art museums as well as with such cultural institutions as the Association for Canadian Studies in the United States; The Balch Institute, Philadelphia; and the American Philosophical Society, Philadelphia.

The Museum has its own conservation capability which enables it to deal with conservation problems affecting the permanent collection and works of art on temporary loan. The Registration Department continues to be responsible for the safe transport of large numbers of both exhibition and individual loans.

During FY 1976, the Museum's Education Department presented 226 film and lecture programs in the Museum's auditorium. Docents trained by the Education Department conducted 3,000 tours for approximately 57,000 members of the public. Telesonic Tours and printed brochures were prepared for all major exhibitions. These programs are being continued and strengthened in FY 1977.

During the past 18 months, the Museum added 80 new works of art to its collection, of which 50 were gifts and 30 were purchased with Federal funds. Among those purchased were works from the estates of David Smith, Ludwig Sanders, and Horacio Torres, and works of younger artists such as Anthony Caro, Catherine Murphy, Frank Stella, and Hsian-Ming Han. During the remainder of FY 1977, the Hirshhorn's principal collecting strategy will continue to emphasize works of art from the last decade.

The Museum also maintains intern programs for undergraduate and graduate students. Among the universities and colleges that have participated in the program are: Rutgers College of the State University of New Jersey; University of California, Santa Cruz; Hunter College of the City University of New York; Rhode Island School of Design; Case Western Reserve, Ohio; and George Washington University.

From October, 1974 when the HMSG opened through December, 1976, some 3,700,000 people have visited the Museum. Estimated public service statistics are shown on the following table:

	Actual FY 1976 (15 months)	Estimated FY 1977	Estimated FY 1978
Museum Attendance	2,022,043	1,600,000	1,700,000
Docent Tours Conducted	2,932	2,700	3,000
Persons on Tours	57,304	54,000	60,000
Number of Films and Lectures	226	200	215
Persons Attending	30,497	27,000	29,000
Major Exhibitions Scheduled	4	5	5
Other Exhibitions in Preparation	11	14	14
Conservation Laboratory			
Works Requiring Major Treatment	23	30	30
Works Requiring Minor Treatment	412	390	390
Museum Loan Program	176	200	250

JUSTIFICATION OF \$50,000 INCREASE (Collections Acquisition) - The Hirshhorn Museum considers acquisitions essential to maintain the collections' standing as a major source of documentation and reference in the field of modern art. Although the Joseph Hirshhorn gift of 1966 provides the core of the collections, an acquisitions program fills gaps in the holdings, particularly of those works executed after 1966, and incorporates works of newly recognized and emerging artists. The acquisitions also provide source materials for use in research and a variety of exhibitions. While the Hirshhorn has been very successful in attracting gifts, these gifts mainly have consisted of earlier works of art and reinforced the original holdings of the Museum. Increased acquisition funds are required in order for the Hirshhorn to maintain its standing as a contemporary art museum covering the spectrum of American and world art--an objective that is not realizable at the current funding level. An additional amount of \$50,000 is sought for this purpose.

FREER GALLERY OF ART

1976 Actual.....\$467,000
T.Q. Actual.....\$106,000
1977 Estimate.....\$525,000
1978 Estimate.....\$549,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	<u>29</u>	<u>1</u>	<u>30</u>
11 Personnel Compensation.....	432	17	449
12 Personnel Benefits.....	42	2	44
24 Printing and Reproduction...	3		3
25 Other Services.....	14	5	19
26 Supplies and Materials.....	20		20
31 Equipment.....	<u>14</u>		<u>14</u>
TOTAL	<u>525</u>	<u>24</u>	<u>549</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		9	
Program Funds.....		<u>15</u>	

ABSTRACT - The Freer Gallery of Art has a continuing program to search for and acquire Far and Near Eastern works of art of the highest quality and to conserve, study, and display these objects as keys to understanding the civilizations that produced them. For FY 1978, an increase of 1 position and \$15,000 will be applied as follows: (1) Conservation--\$5,000 for the care and maintenance of the American oil paintings in the collection; and (2) Building Management--1 position and \$10,000 for a full-time janitor to ensure that the Gallery will meet acceptable maintenance standards. An amount of \$9,000 is requested for necessary pay for existing staff.

PROGRAM - The Freer Gallery of Art houses one of the world's most distinguished collections of Far and Near Eastern art. Included in the collections are over 12,000 works of art from China, Japan, Korea, India, and the Near East. The collections cover paintings, sculptures, and other objects in stone, wood, lacquer, jade, pottery, porcelain, bronze, gold, silver, and Biblical manuscripts. Items not currently on exhibition and the research library of 40,000 volumes are available to students and scholars and are used extensively.

As the United States enters its third century, the importance of achieving better understanding among various peoples and cultures of the world is more clearly apparent than ever before in our nation's history. The past Bicentennial year has witnessed greater cultural awareness, and there is every reason to believe that cultural exchanges between people and institutions in the United States and those in the nations of the Near and the Far East will continue to increase. The unique collection, curatorial staff, conservation laboratories, and research facilities of the Freer Gallery of Art serve to foster greater cultural awareness and understanding by providing important services for the general public and scholars.

The Gallery continues to emphasize its research and exhibition programs. The special Bicentennial exhibition, "A Connoisseur's Vision: Selections from Charles Lang Freer's American Art Collection," opened in November, 1976. This joint research/exhibition project, comprised of the Gallery's American holdings, was accomplished by the Gallery's curatorial and conservation staffs. Many of the objects had not been shown for years and required extensive conservation before the exhibition could be installed. A special exhibition of Oriental calligraphy to be assembled from the

Gallery's collection is scheduled to open in May, 1977. Among the examples are 25 rubbings of Chinese characters which will be exhibited for the first time. In addition to this major exhibition, a number of smaller special exhibitions of objects also derived from Gallery holdings are scheduled during FY 1977 and FY 1978.

In the past few years, art objects of all types have rapidly appreciated in value. Accompanying this rise in value, increasing fakes, forgeries, repaired objects, and pastiches have appeared on the market. It is, therefore, important that the Gallery be able to examine objects to be acquired as thoroughly as possible. The careful, technical examination of objects also serves to assist scholarly study, to reveal the process of manufacture of the object, and to elucidate the history of the technology that produced the object. Several pieces of scientific equipment recently acquired by the Gallery will significantly assist the technical laboratory in its examination efforts.

As part of its public service program, the Freer Gallery of Art attempts to provide a timely response to every request for information from the general public and scholars. In addition, the Gallery has always served as a major educational resource for scholars and universities in the greater Washington area and throughout the United States and abroad.

JUSTIFICATION OF \$15,000 INCREASE:

Conservation - The Freer's conservation program is designed to care for its valuable collections and keep objects in condition suitable for exhibition. A modest increase of \$5,000 to the existing \$15,000 base is requested to acquire the necessary services to maintain and properly care for the Gallery's oil paintings and specially designed contemporary frames.

Building Management - Public use of the Gallery and its various facilities necessitates that all areas of the building be rigorously maintained. The present 8-person janitorial staff is not able to provide the degree of care needed for aesthetic and health considerations on a seven-day a week basis. The 1 janitorial position and \$10,000 requested in FY 1978 will bring the building maintenance staff to a proper level to achieve acceptable standards.

ARCHIVES OF AMERICAN ART

1976 Actual.....\$314,000
T.Q. Actual.....\$ 97,000
1977 Estimate.....\$354,000
1978 Estimate.....\$419,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	<u>15</u>	<u>2</u>	<u>17</u>
11 Personnel Compensation.....	277	27	304
12 Personnel Benefits.....	27	3	30
21 Travel & Trans. of Persons...	7	1	8
22 Transportation of Things.....	4	1	5
23 Rent, Comm. & Utilities.....	22	4	26
24 Printing and Reproduction....	8	22	30
25 Other Services.....	4	2	6
26 Supplies and Materials.....	3	3	6
31 Equipment.....	<u>2</u>	<u>2</u>	<u>4</u>
TOTAL	<u>354</u>	<u>65</u>	<u>419</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		5	
Program Funds.....		60	

ABSTRACT - The Archives of American Art (AAA) serves the research needs of individuals, universities, museums, and other cultural institutions. It collects, preserves, and makes available to students and scholars the documentary resources required for research and publication on American art history. Through microfilm and a network of regional centers, the Archives provides access to its programs. An increase of 2 positions and \$60,000 is sought in FY 1978 for the following program requirements: (1) Collections Acquisition--1 position and \$21,000 to initiate a collecting program in the mid-Atlantic region and to fund related travel and support expenses; (2) Collections Management--1 position and \$19,000 to reduce the number of unprocessed and unfilmed collections; and (3) Printing and Reproduction--\$20,000 to begin the printing of an Archives of American Art publications series, exhibition catalogues, and a semi-annual checklist of the collection. An additional amount of \$5,000 is required for necessary pay for existing staff.

PROGRAM - The AAA, in its 22nd year of operation, was founded because there existed a need for a centralized repository of documentary resources on American art history. Its chief functions are to collect, process, catalogue, and microfilm the primary documentation required by art historians, scholars, and qualified researchers. With five regional offices in Washington, D.C., New York, Boston, Detroit, and San Francisco and with microfilm of the collections made available through interlibrary loan, the Archives holdings are easily accessible worldwide. In FY 1976, the Archives received 333 new collections, including the papers of Edwin Dickinson, Louis Lozowick, Rico LeBrun, Aline Saarinen, Gyorgy Kepes, Alexander Calder, Hiram Powers, and the Cranbrook Foundation. Also in 1976, there were approximately 2,000 research visits to Archives' offices, and 625 rolls of microfilm were sent out through interlibrary loan, representing an increase of approximately 20 percent over 1975. The AAA has continued to be cited increasingly as a source of information for completed books, articles, catalogues, and dissertations.

In conjunction with other bureaus of the Smithsonian, as well as on its own, the Archives has exhibited materials during the past year in the Hirshhorn Museum, the National Portrait Gallery, and the San Francisco Museum of Modern Art. Exhibits

are planned for the near future at Ball State University, the Boston Museum of Fine Arts, the M.H. de Young Memorial Museum, the Oakland Museum, the Los Angeles County Museum of Art, and the Brooklyn Museum. A traveling exhibition titled "Artists and Their Studios" will be shown in Detroit, Portland, Minneapolis, Denver, and Honolulu.

The Archives' oral history program, comprising more than 1,500 transcripts of interviews with artists, dealers, collectors, and administrators is now almost entirely funded by foundation grants.

The Archives anticipates income from trust fund sources of approximately \$250,000 in FY 1977, supporting a staff of 16.

JUSTIFICATION OF \$60,000 INCREASE:

Collections Acquisition - Since 1970, the Washington office of the Archives has served as the chief processing and (most active) reference center. It also houses administrative offices. Unlike the regional offices in Boston, New York, Detroit, and San Francisco, it has never been a collecting center and does not have an Area Director to search out historically important collections. The experience of the past few years indicates that many important papers do exist in and around Washington as well as in Maryland, Delaware, Virginia, West Virginia, and North Carolina. These should be systematically acquired or filmed before they are lost or destroyed. With an already existing facility and some support, it will be far less costly to establish the Washington office as a collecting center than to open a new regional office similar to those in existence. The Archives therefore requests 1 position and \$21,000 to hire an Area Director for the Washington office, thus establishing that office as a collecting center parallel to its other regional offices.

Collections Management - With the addition of new personnel in FY 1976, the Archives has been able to reduce substantially the backlog of unprocessed and unfilmed collections. To date, some 70 percent of all collections have been filmed with more processed and ready for filming. However, with new projects such as the recurring production of Checklist of the Collection, a complete guide to the holdings of the Archives, an expanding demand for exhibition material, and the increase in the number of collections received, the existing collections management staff of six people will not be able to keep up with all aspects of their work. The Archives requests 1 position and \$19,000 to prevent further backlog.

Printing and Reproduction - With a view to increasing its educational function and to disseminating information from its resources, the Archives proposes to expand its publication program which to date has been funded annually from trust fund sources at approximately \$25,000. An annual exhibition catalogue of letters and photographs shown in the Archives gallery, a periodic documentary volume in an Archives of American Art publication series, and regular revisions or supplements to the Archives' published finding aids would be the chief elements in such a program. The Archives requests \$20,000 to support the cost of printing and distribution of such publications through the Smithsonian Press.

COOPER-HEWITT MUSEUM OF DECORATIVE ARTS AND DESIGN

1976 Actual.....\$242,000
 T.Q. Actual.....\$100,000
 1977 Estimate.....\$367,000
 1978 Estimate.....\$377,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	<u>19</u>	<u>0</u>	<u>19</u>
11 Personnel Compensation.....	256	9	265
12 Personnel Benefits.....	27	1	28
21 Travel & Trans. of Persons...	2		2
22 Transportation of Things.....	4		4
23 Rent, Comm. & Utilities.....	40		40
24 Printing and Reproduction....	5		5
25 Other Services.....	3		3
26 Supplies and Materials.....	20		20
31 Equipment.....	<u>10</u>		<u>10</u>
 TOTAL	 <u>367</u>	 <u>10</u>	 <u>377</u>
 <u>Analysis of Increase</u>			
Necessary Pay.....		10	
Program Funds.....		0	

ABSTRACT - The Cooper-Hewitt Museum of Decorative Arts and Design, opened to the public in October, 1976, is one of the world's most distinguished repositories of decorative arts and design. The Museum's holdings include collections of textiles, drawings, prints, wallpaper, furniture, jewelry, glass, ceramics, and silver. No program increase is requested for FY 1978. Necessary pay in the amount of \$10,000 is sought for existing staff.

PROGRAM - The Cooper-Hewitt Museum in New York City is the only museum in the United States devoted exclusively to the study of historical and contemporary design. Its collections currently span 3,000 years and include over 100,000 objects. These collections are supported by one of the most complete decorative arts and design libraries in the country. The library encompasses a reference and rare book library containing over 30,000 volumes, a picture archives of over one and a half million items, and special archives on light and color, industrial design, interior design, pattern and materials, and advertising.

The Cooper-Hewitt Museum reopened to the public in October, 1976, after renovations were completed in its new home, the Carnegie Mansion. By early January over 63,000 people have visited the museum, an average of 5,300 a week. The new quarters allow the collections and library to be housed in expanded, more appropriate facilities. The drawing collection (the largest of its kind in this country) is located in accessible storage space of almost 4,000 square feet, and the internationally known textile collection is also more accessible in an area equipped to protect it from dust and light. The rare book library occupies an entire floor.

Exhibitions will be based on the Museum's collection as well as those of other museums. The opening exhibit "Man Transforms" was designed to make the public more aware of the complicated process of design through simple illustrations that are familiar to everyone. In conjunction with this opening exhibit, 25 museums and libraries in New York City displayed items from the Cooper-Hewitt collections. The Museum has a membership program and has developed a series of educational programs relating to the collections, including classes, lectures, workshops, and tours.

The Smithsonian Institution continues to operate the Cooper-Hewitt Museum on the principle that the program activities of the Museum be conducted with trust funds, and that the use of appropriated funds be limited, insofar as possible, to the protection and preservation of the collections and property.

OFFICE OF THE ASSISTANT SECRETARY FOR PUBLIC SERVICE

1976 Actual.....\$135,000
 T.Q. Actual.....\$ 40,000
 1977 Estimate.....\$195,000
 1978 Estimate.....\$197,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	<u>5</u>	<u>0</u>	<u>8</u>
11 Personnel Compensation.....	161	2	163
12 Personnel Benefits.....	15		15
21 Travel & Trans. of Persons...	4		4
25 Other Services.....	7		7
26 Supplies and Materials.....	3		3
31 Equipment.....	<u>5</u>		<u>5</u>
TOTAL	<u>195</u>	<u>2</u>	<u>197</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		2	
Program Funds.....		<u>0</u>	

ABSTRACT - The Office of the Assistant Secretary for Public Service guides and supports the public service units in the development of programs to advance the Institution's objectives in education and information. No program increase is sought for FY 1978. Funds in the amount of \$2,000 are requested for necessary pay for current staff.

PROGRAM - The primary functions of the Office of Public Service are to stimulate, coordinate, and supervise the steadily increasing activities of the Smithsonian's educational and public service components. These include the Anacostia Neighborhood Museum, the Division of Performing Arts, the Office of Elementary and Secondary Education, and the Office of Smithsonian Symposia and Seminars. Also included are the dissemination of Smithsonian research and interests through the Smithsonian Press and the Smithsonian Magazine; the organization and conduct of adult and teenage educational presentations by the Smithsonian Resident Associates; the development and coordination of a program using the services of volunteers to provide information to the public (in person, by phone, and by mail) and the administration of a placement service of volunteer assistants throughout the Institution by the Visitors Information and Reception Center; and an active public affairs operation dedicated to informing the public of the educational programs and exhibits available to them at or through the facilities of the Smithsonian Institution.

ANACOSTIA NEIGHBORHOOD MUSEUM

1976 Actual.....\$441,000
 T.Q. Actual.....\$226,000
 1977 Estimate.....\$543,000
 1978 Estimate.....\$608,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	19	0	19
11 Personnel Compensation.....	354	4	358
12 Personnel Benefits.....	34	1	35
21 Travel & Trans. of Persons..	3		3
22 Transportation of Things....	1	1	2
23 Rent, Comm. & Utilities.....	43		43
24 Printing and Reproduction...	24		24
25 Other Services.....	28	20	48
26 Supplies and Materials.....	38	39	77
31 Equipment.....	18		18
TOTAL	543	65	608
<u>Analysis of Increase</u>			
Necessary Pay.....		5	
Program Funds.....		60	

ABSTRACT - One of the basic premises on which the Anacostia Neighborhood Museum was established was to provide the opportunity and the resource for a continuing museum experience for community groups and individuals who might not otherwise realize such an opportunity. Through a carefully researched educational program of exhibits and activities especially relevant to the community and its needs, Anacostia has become recognized as a center of black history and culture. Since its opening in September, 1967, it has been visited by more than 570,000 people. The FY 1978 budget requires a further amount of \$60,000 to support the design and production of an exhibit that will depict the culture of African kingdoms of the past and trace their cultural, social, economic, political, and religious history. An amount of \$5,000 is also sought for necessary pay for existing staff.

PROGRAM - The Anacostia Neighborhood Museum (ANM) conducts a research program that supports exhibits design and production, and, through its oral history program, aims to preserve the life styles and the cultural heritage of a community. Frequently the data resulting from staff research is published as catalogues to accompany exhibitions and as teacher aids. This program has resulted in the establishment of a bi-racial group, The Anacostia Historical Society, which through its volunteer efforts and community involvement, has made significant contributions to the oral history program as well as other research activities.

A key event during 1976 was the opening of the new exhibits laboratory and the enrollment of the first 11 trainees to begin formal training in exhibits design and production. The facility also will provide for the fabrication and maintenance of innovative, quality exhibits. Exhibits which opened during 1976 included the Bicentennial production "Black Women" and the well-received "John Robinson Retrospective," a presentation on the creative talents and skills of a native Anacostia neighborhood artist. Exhibits being prepared for 1977 openings are "The Anacostia Story" and "The Frederick Douglass Years" as well as several art shows and displays.

Anacostia's education department actively supports teachers and students through on-site and extension programs and through these efforts has created a network of

Anacostia teachers who now serve as liaison with the Museum. Teacher workshops and seminars are conducted by the staff and work continues on the development of educational aids and materials. As a result of the cooperative efforts of the education staff, neighborhood teachers, and residents, Anacostia has published A Walk Through "Old" Anacostia, written especially for children, which serves as a guide for a walking tour of the historical area of Anacostia.

JUSTIFICATION OF \$60,000 INCREASE (Exhibitions and Performances) - The culture and history of ancient African kingdoms is rich and varied. Until recently, however, historians have largely overlooked Africa's development prior to the arrival of the Europeans. As a result, Africa has been conceived of primarily as a culturally backward, primitive, and underdeveloped land. To dispel myths, distortions, stereotypes, and faulty interpretations, the ANM plans to produce and install a major exhibit, "Ancient African Kingdoms." The exhibit will trace the development of cultural, social, religious, economic, and political institutions in early African kingdoms using a simulated environment, maps, photographs, artifacts, memorabilia, documents, and art objects. In an era when developing African nations are playing an increasingly significant role in world affairs, it is important to understand facets of African history which have long been misunderstood or omitted. An amount of \$60,000 is requested for supplies, materials, contractual services, and other expenses related to the research, design, and production needed to accomplish this important exhibit.

INTERNATIONAL EXCHANGE SERVICE

1976 Actual.....\$168,000
T.Q. Actual.....\$ 48,000
1977 Estimate.....\$222,000
1978 Estimate.....\$224,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	9	0	9
11 Personnel Compensation.....	115	2	117
12 Personnel Benefits.....	11		11
22 Transportation of Things.....	81		81
26 Supplies and Materials.....	10		10
31 Equipment.....	5		5
TOTAL	222	2	224
<u>Analysis of Increase</u>			
Necessary Pay.....		2	
Program Funds.....		0	

ABSTRACT - Through the International Exchange Service, public and private institutions in the United States exchange publications with organizations in other countries. This includes the exchange of official United States publications, including the daily issues of the Federal Register and the Congressional Record, as well as private publications such as medical and dental texts. No program increase is sought for FY 1978. Funds in the amount of \$2,000 are requested for necessary pay for existing staff.

PROGRAM - In 1849, the Smithsonian Institution established a system for the exchange of its publications with the learned societies of other countries. This program was so successful that later it was extended to include the publications of other American organizations. The Exchange's responsibilities were formalized when the Brussels Convention of 1866 was adopted by the United States, and the Smithsonian Institution became the official exchange bureau in the United States for the international exchange of literary, scientific, and cultural publications. In addition, the Resolution to Provide for the Exchange of Certain Public Documents (14 Stat. 573, as amended) provides that the exchange of official United States publications shall be made through the Smithsonian Institution. In FY 1976, approximately 2.5 million publications were transmitted to over 100 countries for exchange documents. In addition to official United States publications, this outflow included publications from about 250 organizations representing every state in the Union. Approximately 100,000 packages were received from foreign institutions for distribution in the United States.

DIVISION OF PERFORMING ARTS

1976 Actual.....\$576,000
T.Q. Actual.....\$567,000
1977 Estimate.....\$348,000
1978 Estimate.....\$350,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	9	0	9
11 Personnel Compensation.....	198	2	200
12 Personnel Benefits.....	19		19
21 Travel & Trans. of Persons..	14		14
22 Transportation of Things....	2		2
23 Rent, Comm. & Utilities.....	6		6
24 Printing and Reproduction...	6		6
25 Other Services.....	88		88
26 Supplies and Materials.....	10		10
31 Equipment.....	5		5
TOTAL	348	2	350
<u>Analysis of Increase</u>			
Necessary Pay.....		2	
Program Funds.....		0	

ABSTRACT - The Division of Performing Arts (DPA) has primary responsibility for the production and presentation of live performance events of the Smithsonian Institution and its museums, with emphasis on programs that relate to and enhance museum collections and that deal with national aesthetic expressions. No program increase is sought for FY 1978. An amount of \$2,000 is required for necessary pay for current staff.

PROGRAM - DPA is the primary planning, producing, and supervising organization in the Smithsonian for all performances. The Federal appropriation provides for central administration and direction of these activities and for some program development. Most of the Division's activities, however, are produced with funds from other sources.

During the summer of 1976, the Division presented its tenth annual Festival of American Folklife which extended for 12 weeks in recognition of the Bicentennial. Upon the completion of this Festival, a restructuring of the Division took place. In an effort to preserve the great wealth of material generated by the Bicentennial Festival, a portion of the Division's resources was applied to form a separate Folklife Unit (see "Special Programs," Page A-75).

Following a period of analysis and discussion by the newly established Smithsonian Folklife Advisory Council, the decision was made to continue the Folklife Festival in FY 1977 but with a different format and on a smaller scale. Rather than using the limited available resources to present materials from both the Old and New Worlds, the FY 1977 Festival will be devoted exclusively to Folklife in America. It will integrate presentations of folkways, folk music, and traditional crafts with the regular programs of the various Smithsonian museums, thus taking advantage of the vast resources of expertise, collections, and exhibits already existing within the Institution.

The Division, as part of the process of disengagement from its Bicentennial activities, has reviewed its programs and activities. The most successful and

pertinent programs are being retained; others will be phased out. For example, the African Diaspora, initiated as a program to illustrate black cultural expressions at the Festival, will be continued on a broader scale. By making curriculum materials derived from the Festival available to schools, this activity will strive to encourage more participation in the Smithsonian and its programs on the part of the black community.

A totally new approach for the use of the performing arts as an educational medium for children has been developed, and a new project is being undertaken with the National Zoo to experiment with the concept. Called a "Learning Circus," the concept involves the use of improvisational theater techniques to teach complex ideas in science and art. Further moves are being planned that will upgrade the popular Puppet Theatre to make it more responsive to the museums and their educational programs, and to use its space more intensively by including other children's activities.

Other popular programs of the Division of Performing Arts, such as the Winter Program Series which now presents over 50 events to capacity audiences encompassing a wide range of American and international expression, will continue to be produced. In addition the program of recordings, "The Smithsonian Collection," has added four new releases in American jazz in FY 1976, and will offer five new releases this year. Material will be drawn from a broader base of material, such as historical Broadway shows never previously recorded. The program of recording the oral history of jazz, carried out in cooperation with the National Endowment for the Arts, will continue at the same level as last year.

OFFICE OF PUBLIC AFFAIRS

1976 Actual.....\$337,000
T.Q. Actual.....\$148,000
1977 Estimate.....\$394,000
1978 Estimate.....\$450,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	17	0	17
11 Personnel Compensation.....	282	5	287
12 Personnel Benefits.....	27	1	28
21 Travel & Trans. of Persons..	1		1
23 Rent, Comm. & Utilities.....	4		4
24 Printing and Reproduction...	55	50	105
25 Other Services.....	15		15
26 Supplies and Materials.....	7		7
31 Equipment.....	3		3
TOTAL	394	56	450
<u>Analysis of Increase</u>			
Necessary Pay.....		6	
Program Funds.....		50	

ABSTRACT - The Office of Public Affairs is responsible for the communication of information about the Smithsonian and its programs to the general public and specialized groups through various media--radio, television, newspapers, popular and scientific periodicals, press releases, general information and visitor orientation pamphlets, and other items. Also included in the base resources shown are 2 positions and \$36,000 for the separately administered Office of Telecommunications. In FY 1978, an amount of \$50,000 is requested to cover the increased costs associated with the printing and distribution of informational publications. An additional amount of \$6,000 is requested for necessary pay for existing staff.

PROGRAM - The Office of Public Affairs serves millions of museum and gallery visitors annually as well as the general public through the communication of informative and educational data about the Smithsonian and its programs. A wide array of communications media is used: newspapers, wire services, popular and scholarly periodicals, radio and television news, recorded phone messages such as Dial-A-Phenomenon, and general information pamphlets and publications. Each year brochures describing the Smithsonian's major attractions are printed in English, French, German, Japanese, and Spanish language versions and distributed without charge to visitor orientation centers, Congressional offices, and travel bureaus. Other informational publications include a calendar of Smithsonian-wide events; a staff newspaper, The Torch; and Research Reports, a quarterly publication which reviews significant current research of the Smithsonian's scientists.

In addition, this Office responds to thousands of requests for interviews, research data, photographs, publications, and reference materials. Assistance often is rendered in the preparation of articles and graphics for school textbooks, encyclopedias, and special publications on subjects in which the Smithsonian has demonstrated a special competence.

The still-developing medium of telecommunications has provided the Smithsonian Institution with the potential for an even wider diffusion of knowledge about the Institution and its diverse programs and research. "Radio Smithsonian," aired weekly

in the Washington, D.C. area, presents interviews with staff specialists, music based on the collections, and other topics of general interest. Also during FY 1976, a half-hour film about the Institution was produced and a number of archival projects were filmed.

The Office of Public Affairs also administers the Office of Special Events, which assists with exhibition openings, seminars, meetings, and special activities held in Smithsonian facilities in Washington, D.C.

JUSTIFICATION OF \$50,000 INCREASE (Printing and Reproduction) - Through its various publications, the Smithsonian seeks to disseminate to as wide an audience as possible information concerning significant current research, special performances, new exhibits, as well as information which will assist in visitor orientation and understanding. The cost of printing and distributing these publications rose approximately 15 percent last year. In FY 1978, an additional \$50,000 is requested to meet the increased costs of printing such items as the Calendar of the Smithsonian Institution, Research Reports, a revised edition of the basic information brochure, Increase and Diffusion, and Smithsonian welcome brochures, including French, German, Japanese, and Spanish language versions. The requested funds will also allow for the printing and distribution of more of these informational documents to meet a growing demand.

SMITHSONIAN INSTITUTION PRESS

1976 Actual.....\$618,000
 T.Q. Actual.....\$194,000
 1977 Estimate.....\$681,000
 1978 Estimate.....\$689,000

(Dollars in thousands)	<u>Base FY 1977</u>	<u>Increase Requested</u>	<u>Est. FY 1978</u>
Number of Permanent Positions..	<u>28</u>	<u>0</u>	<u>28</u>
11 Personnel Compensation.....	567	7	574
12 Personnel Benefits.....	54	1	55
21 Travel & Trans. of Persons...	1		1
23 Rent, Comm. & Utilities.....	3		3
24 Printing and Reproduction....	47		47
25 Other Services.....	6		6
26 Supplies and Materials.....	2		2
31 Equipment.....	<u>1</u>		<u>1</u>
 TOTAL	 <u>681</u>	 <u>8</u>	 <u>689</u>
 <u>Analysis of Increase</u>			
Necessary Pay.....		8	
Program Funds.....		<u>0</u>	

ABSTRACT - The Smithsonian Institution Press is responsible for the editing, design, production, and distribution of printed materials produced by historians, scientists, and curators. Included in this work are multi-volume monographs, eight technical and scientific series, exhibit catalogues for the several museums, education pamphlets, and information leaflets. No program increase is sought for FY 1978. Necessary pay in the amount of \$8,000 is requested for existing staff.

PROGRAM - Press publication activity is a fundamental extension of the work of the Smithsonian's basic research laboratories. Necessary for advancement of ecology, conservation and other basic and applied studies by researchers, these reports are distributed to major libraries and scientific institutions in all 50 states and many foreign countries. The Press edits and designs manuscripts and issues contracts for the printing of exhibit catalogues, education pamphlets, and informative leaflets for the many millions of visitors to the Smithsonian each year, as well as for the growing number of extension programs such as the Smithsonian Institution Traveling Exhibition Service, Division of Performing Arts, and the Office of Elementary and Secondary Education. These extension programs are disseminating information on Smithsonian collections and research activities to communities and educational groups across the nation. In FY 1978, an additional technical and scientific series, Smithsonian Contributions to Marine Science, is planned for publication, and one of the existing series, Smithsonian Studies in Air and Space, is being revitalized.

The Press reviews each manuscript submission for editorial content and completeness, quality of typing, illustrations, etc. before acceptance. Inadequately prepared manuscripts (i.e., those that would be too costly to edit or manufacture) are not accepted for publication. Finally, the Press furnishes the Institution with a variety of necessary manuals, reports, and directories, including copies of Congressional materials and reports from Government agencies.

Press publications in FY 1976 included 10 trade books, 38 art and exhibition catalogues and checklists, 36 booklets, and other miscellaneous printed materials. In the scientific and technical series, 78 monographs were published. These publications received favorable critical review and the Press again received awards for editing and design.

OFFICE OF THE ASSISTANT SECRETARY FOR MUSEUM PROGRAMS
AND
OFFICE OF MUSEUM PROGRAMS

1976 Actual.....\$1,356,000
T.Q. Actual.....\$ 433,000
1977 Estimate.....\$1,804,000
1978 Estimate.....\$1,843,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions...	89	4	93
11 Personnel Compensation.....	1,293	88	1,381
12 Personnel Benefits.....	124	8	132
21 Travel & Trans. of Persons...	12	2	14
22 Transportation of Things.....	1		1
23 Rent, Comm. & Utilities.....	20	1	21
24 Printing and Reproduction....	13	5	18
25 Other Services.....	201	-65	136
26 Supplies and Materials.....	112		112
31 Equipment.....	28		28
TOTAL	1,804	39	1,843
<u>Analysis of Increase</u>			
Necessary Pay.....		29	
Program Funds.....		135	
Nonrecurring Funds.....		-125	

ABSTRACT - The Assistant Secretary for Museum Programs oversees, reviews, and supports the Institution's museum and exhibition activities, and its program resource facilities; and assists and advises the Secretary on special studies and other matters designed to improve those activities. This Office provides advice, technical assistance, and documentary resources to other museums, undertakes studies on the effectiveness of museums as learning environments and on visitor reaction to exhibits, develops training workshops for museum personnel, and disseminates technical information on museum practices and techniques. The Office also oversees the South Group Buildings Manager who is responsible for the maintenance of the Arts and Industries and Smithsonian Institution Buildings. The newly established Office of Horticulture, formerly a division in the Office of Plant Services, is now within the purview of the Assistant Secretary for Museum Programs. In addition to its traditional grounds maintenance function, the Office of Horticulture is responsible for research and exhibit activities.

In FY 1978 an increase of 4 positions and \$135,000 is sought for: (1) Collections Management--\$40,000 to meet the costs associated with the study efforts and the collections organization and installation activities related to the Museum Support Center program; (2) Mall Site Planning--\$50,000 for exhibit and design services and related expenses for planning the potential use of the last building site on the Mall; and (3) 4 positions (\$45,000--3 gardeners and a clerk-typist) to assure proper care of plants, particularly in the greenhouse-nursery complex and to meet the additional workload associated with an expanded horticultural and landscape planning program. Funding of \$29,000 is required for necessary pay for existing staff. These proposed increases are offset by the nonrecurrence of \$125,000 appropriated for a collections management study in FY 1977.

PROGRAM - I. Assistant Secretary for Museum Programs: With 18 positions and \$448,000 as base resources (excluding the \$125,000 used for a collections management study in FY 1977), the Office administers, oversees, reviews, and supports the Office

of Museum Programs, Office of the Registrar, Conservation-Analytical Laboratory, Office of Exhibits Central, Smithsonian Libraries, Smithsonian Archives, National Museum Act, Smithsonian Institution Traveling Exhibition Service, Office of Horticulture, and South Group Buildings Manager. The Office coordinates projects related to the development and improvement of facilities and operational methods of Smithsonian museums in cooperation with other units of the Institution. It works closely with museum professionals and museum organizations, nationally and abroad, to enhance museums in the performance of scholarly and public educational functions. The Office is also responsible for the development of improved programs related to training in museology and museography and for the development of new techniques in museum administration and practice.

This Office maintains and directly oversees three major and closely related programs for training museum personnel, disseminating technical information, and investigating museum exhibitions and operations and their relationship to the museum audience.

The Museum Workshop Program offers workshops, seminars, and training courses to individuals gainfully employed by museums. Workshops are taught primarily by Smithsonian staff and each is devoted to a specific museum method or problem. The Workshop Program has grown from 13 seminars, offered to 240 participants, in FY 1975 to 24 seminars to be offered to approximately 360 participants in FY 1977. For FY 1978, plans call for 30 workshops to be presented with an estimated 450 participants. Subject matter for seminars and workshops includes such topics as exhibits design, label writing, lighting, training docents, uses of photography in museums, insurance problems for museums, museum storage techniques, and general museum administrative methods. Increased emphasis will be placed on museum-school relationships, the development and maintenance of museum collections, and improved public information programs. Several seminars will be developed specifically for the benefit of Smithsonian Institution staff members and will address themselves to their special needs. Plans are also being formulated for the presentation of seminars in various regions of the country, at no increased expense to the Institution. The costs for these seminars will be borne by host organizations and participants. A special program to begin in FY 1977 will offer museum training to the Native American community. It will stress proper methods of care of ethnographic collections held on reservations and will be developed with the cooperation and under the guidance of the National Museum of Natural History.

The Conservation Information Program investigates appropriate topics and writes and produces audio-visual information programs in cooperation with other Smithsonian units. These programs deal with museum practices and techniques, with emphasis on museum conservation, and are made available on a loan basis (with charges for mailing costs only) to museums, museum-related organizations, and schools throughout the country. In FY 1976, final editing and duplication of the videotaped series of 80 lectures prepared by the Conservation-Analytical Laboratory on the chemical and physical properties involved in museum conservation were completed and the tapes are now in circulation. A series of new slide-cassette presentations on specific conservation themes is now under production. Additional programs are being scripted and will be produced this year for distribution in FY 1978. These will supplement the seven programs presently in circulation. During FY 1976, more than 240 organizations requested use of 460 slide-cassette and 250 videotape programs for viewing.

The Psychological Studies Program examines the effectiveness of exhibits and visitor reactions to them. Studies have included basic research on various exhibition techniques, methods of labeling, museum floor plans, and audio-visual and visitor-response devices. Other studies have dealt with problems of visitor orientation and the most efficient use of directional and informational signage in museums. An examination of the program was initiated in FY 1976. Conferences and communications with experts in the field of evaluation will continue through FY 1977 to develop the soundest possible basis for future studies. It is preliminarily contemplated that the program will be expanded to include evaluation of educational activities within the Smithsonian and other museums.

II. South Group Buildings Manager: With 45 positions and \$637,000 as base resources, the South Group Buildings Manager's office plans and supervises cleaning, maintenance, and servicing for staff offices, work areas, and the public exhibition areas of the Smithsonian Institution Building and Arts and Industries Building. This involves cleaning of all office, exhibition, laboratory, and public facility areas; provision of building services for building occupants; preparation of areas for special events, including lectures, temporary exhibitions, meetings, and seminars; and arrangements for transportation of objects, materials, and equipment. Services must be provided on a seven-day per week basis.

III. The Office of Horticulture: In FY 1976, the duties of the former Horticultural Services Division of the Office of Plant Services were expanded to include the objective of developing the horticultural program of the Institution as a research and exhibit activity. Accordingly, the division was restructured as the Office of Horticulture and placed within the purview of the Assistant Secretary for Museum Programs.

With 26 positions and \$594,000 as base resources, the Office of Horticulture is responsible for the development of the grounds of the many museums and properties of the Smithsonian Institution as botanical and horticultural exhibit areas, and for coordinating a comprehensive program of horticultural research and educational activities for the Institution. This Office also maintains the grounds of Smithsonian properties and reviews and approves all improvement and renovation projects occurring on these grounds. It serves as the liaison with governmental agencies (National Park Service, District Tree Service, Commission of Fine Arts, National Capital Planning Commission, etc.) on grounds beautification planning, and provides consulting and design services in horticultural and landscaping matters for Smithsonian facilities located outside the Washington area. Basic and applied horticultural research programs are conducted in cooperation with other Institutional units and with other horticultural and botanical organizations and involve chemical pinching, light intensities required for interior plants, testing of annuals, and the propagation and dissemination of endangered plant species. The Office conducts an upward mobility educational program for gardeners employed by the Institution, assists interns in horticultural and related disciplines, offers short courses in gardening for the public, and distributes horticultural literature.

In FY 1976, the Office of Horticulture designed and developed the Victorian Garden to the south of the Smithsonian Institution Building. The Office also designed, installed, and is maintaining the Horticultural Exhibit for the "1876 Centennial" exhibition in the Arts and Industries Building, based on the Centennial Exhibit in Horticultural Hall in Philadelphia a century ago. A fragrance garden, planned especially for handicapped visitors, has been designed for the area between the Arts and Industries Building and the Hirshhorn Museum. Preliminary plans for the redesign of the garden and development of a handicapped entrance to the Hirshhorn Sculpture Garden have been prepared.

In FY 1977 and 1978, the Office of Horticulture will continue to improve and refine existing horticultural installations both within and outside the Smithsonian's buildings, upgrade its level of maintenance activities, and make additional horticultural exhibits available to the public.

JUSTIFICATION OF \$135,000 INCREASE:

Collections Policy and Management - Using funds appropriated in FY 1977, a museum collections policy and management study is in progress and will result in a report which will be available early this fall. This study was suggested to the Institution by the Office of Management and Budget as a way to develop a clearer understanding of the Institution's present and potential collections activities, especially as they relate to acquisition, research, and storage. The study is assembling information on the philosophy, policy, practice, and procedures affecting acquisition and disposal, storage, documentation, and retention of collections. It includes an examination of matters affecting space utilization and future requirements,

such as the preservation of collections and their accessibility for research and information retrieval. Collections are being studied with attention to the commonalities and differences inherent in management practices and policies surrounding art, history, and science areas. A portion of the effort and the funds will be devoted to an intensive study of one or more discrete collections to gain insights regarding retention requirements and implications for space needs. Other funds may be applied to an evaluation of storage methods and materials that could be used in the proposed Museum Support Center.

It is clear that the necessary growth of collections and the presently crowded and inadequate storage space in the museum buildings necessitates a continuing, long-term commitment to monitor closely established standards and procedures in order to ensure the preservation and effective use of current holdings. Also, it is incumbent on the Smithsonian to continue to originate and examine developing methodologies in such fields as conservation, data recording and retrieval, space utilization, and storage systems.

Accordingly, \$40,000 is requested in FY 1978 to meet continuing costs associated with the study efforts and the collections organization and installation activities related to the Museum Support Center program. These funds will be used for temporary appointments and the engagement of consultants to examine and advise on particular aspects of collections management and to review and critique Smithsonian staff studies. They will also be used for travel to gain knowledge on other museum practices and for computer time and printing to assemble data and prepare reports of findings and conclusions.

Exhibitions--Mall Site Planning - Public Law 94-74, approved August 8, 1975, reserved the last building site on the Mall between Third and Fourth Streets, Independence Avenue, and Jefferson Drive for the Smithsonian to develop for public purposes subject to prior Congressional approval.

Preparation of a plan for use of the site requires thorough study and examination. The Institution does not hold a preconceived notion about a particular type of structure or subject matter to be exhibited. Several possible alternative themes, such as the demonstration of new plant strains and future energy sources, merit detailed consideration. For each alternative theme studied, it is essential to investigate a variety of exhibit techniques to assure that the presentation can be made in an informative and educationally effective manner. Also, building plans for the site must be planned in conjunction with the subject matter to be exhibited and must be compatible with the aesthetic qualities of the Mall area. An amount of \$50,000 is requested to assist the Institution in its planning process so that it may present a sound program for use of this extremely valuable site to the Congress. Funds will be used for the exhibit and design consultation service and to convene small groups of specialists and experts who will contribute to the preparation and review of proposals.

Building and Facilities Management--Office of Horticulture - Through the operation of a greenhouse-nursery complex located at the U.S. Soldiers' and Airmen's Home on North Capitol Street, the Office of Horticulture collects, propagates, and produces rare and unusual plants for use on Smithsonian grounds as well as in its museums--as exhibits unto themselves and as auxiliaries to other exhibits. Daily attention to these plants is essential to assure proper growth and avoid loss. Three new gardener positions (\$36,000) are requested to permit essential horticultural maintenance services seven days a week. An additional clerk-typist (\$9,000) is also sought to meet additional workload associated with expanded horticultural and landscape planning.

OFFICE OF THE REGISTRAR

1976 Actual.....\$200,000
T.Q. Actual.....\$ 20,000
1977 Estimate.....\$ 96,000
1978 Estimate.....\$ 97,000

(Dollars in thousands)	<u>Base FY 1977</u>	<u>Increase Requested</u>	<u>Est. FY 1978</u>
Number of Permanent Positions..	<u>4</u>	<u>0</u>	<u>4</u>
11 Personnel Compensation.....	76	1	77
12 Personnel Benefits.....	7		7
21 Travel & Trans. of Persons..	3		3
24 Printing and Reproduction...	1		1
25 Other Services.....	3		3
26 Supplies and Materials.....	4		4
31 Equipment.....	<u>2</u>		<u>2</u>
TOTAL	<u>96</u>	<u>1</u>	<u>97</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		1	
Program Funds.....		0	

ABSTRACT - The Office of the Registrar is responsible for the Institution-wide development, oversight, and coordination of information management for all museum objects and specimens held by the Smithsonian. The Registrar's Office is charged with development of a standardized information system for effective intellectual integration of the National Collections, and assisting the bureaus in the establishment of modernized museum information systems. No program increase is sought for FY 1978. An amount of \$1,000 is requested for necessary pay for existing staff.

PROGRAM - Since the 1880's, the Office of the Registrar has provided centralized registration services for the Natural History and History and Technology collections. Through the years, centralized support of these collections has become antiquated and inadequate. Moreover, critical areas of collections management have not even been addressed. As a result, beginning in FY 1974, the registration and record keeping activities of the Institution have been undergoing decentralization and such extraneous functions as mail service and public inquiry have been transferred from the Office of the Registrar to more appropriate Smithsonian units. The final steps in the decentralization of traditional registration functions were completed in FY 1976. All Smithsonian bureaus now have administration of their own registration activities, a necessity for effective record keeping and control in view of the diversity of collections and activities of these bureaus.

The Office of the Registrar presently consists of a small, core staff whose attention is focused primarily on the information systems aspect of collections management at the Institutional level. The Office is pursuing such projects as a data element inventory, an analysis of potential subject thesauri, a critical review of networking needs and a feasibility study of data processing standards for the storage and retrieval of information pertaining to collected objects and specimens. The Registrar's Office also provides continuing assistance to the bureaus in the modernization of their own systems.

CONSERVATION-ANALYTICAL LABORATORY

1976 Actual.....\$563,000
T.Q. Actual.....\$133,000
1977 Estimate.....\$622,000
1978 Estimate.....\$629,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	<u>23</u>	<u>0</u>	<u>23</u>
11 Personnel Compensation.....	389	6	395
12 Personnel Benefits.....	37	1	38
21 Travel & Trans. of Persons..	13		13
23 Rent, Comm. & Utilities.....	11		11
25 Other Services.....	81		81
26 Supplies and Materials.....	35		35
31 Equipment.....	<u>56</u>		<u>56</u>
TOTAL	<u>622</u>	<u>7</u>	<u>629</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		7	
Program Funds.....		0	

ABSTRACT - The Conservation-Analytical Laboratory (CAL) is responsible primarily for advising and assisting museums in preserving the National Collections. It offers advice about the suitability of buildings' environmental conditions for objects displayed or stored; examines, advises or treats objects for their protection and preservation; analyzes objects for basic research data required by curators, scientists, and historians; and conducts training programs in association with the Office of Museum Programs. No program increase is sought for FY 1978. Necessary pay in the amount of \$7,000 is required for existing staff.

PROGRAM - The CAL was established in 1963 to serve the museums of the Smithsonian Institution. Based upon examination or analysis of objects, the conservators and scientists on CAL's staff provide advice to curatorial units on conservation procedures. Objects which cannot be treated by their units, present special problems, or require more specialized equipment than is available locally are treated in this central laboratory.

Analyses of objects or their materials (e.g., pigments, resins, fibers, alloys, or corrosion products) by advanced instrumentation serve to determine appropriate conservation procedures or to provide museum archeologists and historians with basic research data concerned with dates, attribution, and earlier production methods. Commercial products proposed for prolonged contact with artifacts (or fumigants used in storage) are examined for suitability. Ceramics are dated by the most up-to-date thermoluminescent methods.

The CAL is continuing the development of its data processing system in conjunction with the Office of Computer Services to meet the increasing demands of conservators by providing rapid retrieval of tested procedures. In addition, technical information on conservation practices in the form of video-taped programs and tape-slide lectures are provided for use by Smithsonian staff, Federal organizations, and others throughout the nation.

Progress made in conservation during the past year has been multi-faceted. Over 400 objects or samples from 19 units were analyzed and/or treated. Under the Institution's higher education program, a postdoctoral Fellow has commenced study of the composition of "Steatite" objects to ascertain possible sources. A metallurgical study of the bronze objects excavated at Tell-Gemmeh, Israel has been sponsored. The Laboratory has also expanded its educational program by organizing, in association with the National Bureau of Standards, a series of seminars on science applied to the study of museum artifacts.

SMITHSONIAN INSTITUTION LIBRARIES

1976 Actual.....\$1,770,000
T.Q. Actual.....\$ 574,000
1977 Estimate.....\$2,056,000
1978 Estimate.....\$2,190,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	<u>95</u>	<u>1</u>	<u>96</u>
11 Personnel Compensation.....	1,381	36	1,417
12 Personnel Benefits.....	132	4	136
21 Travel & Trans. of Persons..	13		13
22 Transportation of Things....	2		2
23 Rent, Comm. & Utilities.....	15		15
24 Printing and Reproduction...	83		83
25 Other Services.....	55	15	70
26 Supplies and Materials.....	183	34	217
31 Equipment.....	<u>192</u>	<u>45</u>	<u>237</u>
 TOTAL	 <u>2,056</u>	 <u>134</u>	 <u>2,190</u>
 <u>Analysis of Increase</u>			
Necessary Pay.....		29	
Program Funds.....		105	

ABSTRACT - The Smithsonian Institution Libraries provides library and information services to support research, exhibits, public service, and education programs. In FY 1978, an increase of 1 position and \$105,000 is requested to meet the following needs: (1) to acquire necessary library materials (\$73,000); (2) to implement an enhanced automated acquisitions system (\$10,000); and (3) to improve cataloguing productivity and thereby make library materials available to users in a more timely and efficient manner (1 position and \$22,000). An amount of \$29,000 is needed for necessary pay for existing staff.

PROGRAM - The Smithsonian Institution Libraries is a decentralized system comprised of 13 bureau libraries and many departmental library locations. This decentralized system is supported by centralized reference and circulation, acquisitions, cataloguing, conservation, and administrative services. The Libraries' collections are especially strong in natural history, American ethnology and culture, and the history of science and technology, including the Dibner Collection of rare materials in the history of science and technology.

During FY 1976, the National Air and Space Museum Library opened in its new facilities, and the project to catalogue its uncatalogued library materials (some 6,000 volumes) was completed. Rare books were selected for the Dibner Collection and transported to Washington. The Libraries' conservation program was enhanced by the addition of a professional conservator and the design of a conservation laboratory at the Smithsonian's Service Center.

In recent years, the Libraries has increased support of all library activity in the Institution. The Libraries has added staff to service locations, has augmented bureau and departmental book and binding funds, and has assumed full responsibility for library staffing for such bureaus as the National Air and Space Museum, the Smithsonian Tropical Research Institute, and the Cooper-Hewitt Museum. It is the goal of the Libraries to provide effective library service with the least duplication of resources and effort. For this reason, the Libraries maintains close communication

with the National Collection of Fine Arts, the National Portrait Gallery, the Hirshhorn Museum, and the Freer Gallery which have responsibility for the development of their own library operations. These bureaus fund their library operations to varying degrees, but the Smithsonian Institution Libraries provides general reference and circulation service, technical support, administrative advice, and assistance in funding the purchases and binding of library materials for some of these bureaus.

JUSTIFICATION OF \$105,000 INCREASE (Libraries) - In FY 1978, an increase of 1 position and \$105,000 is requested to enable the Libraries to continue to acquire materials needed to support the programs of the Smithsonian Institution and to make library materials available to users in a more timely and efficient manner.

Of the requested increase, an amount of \$73,000 is sought to purchase those library materials most critically needed by users. Approximately half of this amount is required merely to restore purchasing power eroded by inflation. For example, the average annual increase in the cost of serials for the past several years has been about 12 percent and of monographs, 10 percent. The total request of \$73,000 will allow a base for library acquisitions of approximately \$380,000, which is some 70 percent of the amount considered necessary (\$550,000 in FY 1977 dollars) to enable the Libraries to develop an adequate basic collection of library materials for its users.

The automated system which supports the acquisition of library materials for the entire Institution was developed in the mid-1960's. In order to improve the timeliness and efficiency of the acquisitions process, the system must now be enhanced to take advantage of recent technological developments such as advances in data-entry techniques. An amount of \$10,000 additional is requested for implementation of an expanded automated acquisitions system.

Approximately 200,000 volumes of library materials are uncatalogued and virtually inaccessible to users. The practice of full-cataloguing, which entails development of a complete bibliographic description for each work, is desirable, but costly and time-consuming. In view of the large volume of unrecorded works, a study will be undertaken in FY 1977 to develop alternate techniques of gaining bibliographic control of these materials. An amount of \$10,000 is requested to begin implementation of a new system in FY 1978. This system is expected to involve translation of a new short bibliographic record into a machine-readable form.

Despite significant improvements in productivity resulting from the use of computerized cataloguing and the proposed development of alternate means of control, the backlog of materials requiring full cataloguing will continue to increase each year by an estimated 3,000 volumes. Greater cataloguing productivity can be achieved by reassigning certain less complex tasks (such as adapting available cataloguing records for use in the Smithsonian libraries) to technical support staff, thereby allowing professionally trained cataloguers to concentrate on the intellectual efforts required for full, original cataloguing. An increase of 1 position and \$12,000 is requested to allow additional technical support for these cataloguing services.

OFFICE OF EXHIBITS CENTRAL

1976 Actual.....	\$ 972,000
T.Q. Actual.....	\$ 263,000
1977 Estimate.....	\$1,061,000
1978 Estimate.....	\$1,072,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	<u>48</u>	<u>0</u>	<u>48</u>
11 Personnel Compensation.....	875	10	885
12 Personnel Benefits.....	84	1	85
21 Travel & Trans. of Persons..	3		3
22 Transportation of Things....	1		1
23 Rent, Comm. & Utilities.....	4		4
24 Printing and Reproduction...	3		3
25 Other Services.....	20		20
26 Supplies and Materials.....	53		53
31 Equipment.....	<u>18</u>		<u>18</u>
TOTAL	<u>1,061</u>	<u>11</u>	<u>1,072</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		11	
Program Funds.....		0	

ABSTRACT - The Office of Exhibits Central (OEC) prepares exhibits and related products for those museums, programs, and other offices not having their own internal capabilities. OEC also provides specialized exhibit assistance to other bureaus and offices. No program increase is requested for FY 1978. Necessary pay in the amount of \$11,000 is sought for existing staff.

PROGRAM - The OEC provides design, production, installation, and maintenance services to those museums, programs, and other offices of the Institution not having their own capabilities for this work and provides specialized assistance to other museums whose programs do not require or allow full-time staffing and/or establishment of certain shop facilities. Consultation as well as job performance is available in the following specialized areas: label editorial services, exhibition lighting, exhibit motion picture production, audio-visual presentations, freeze-dry taxidermy, and the services of models, plastics, and restoration laboratories (specializing in fluid, thermo-setting, and reinforced plastics used in museum applications).

In coordination with the Office of Museum Programs, OEC also provides training in exhibition media and techniques and is developing programs to research, design, develop, evaluate, and communicate new exhibition techniques, systems, and procedures of value to the museum community.

Bicentennial exhibits and activities have occupied OEC's attention during the past eighteen months. Examples include an exhibition of English silver and gold designed and installed in the Smithsonian Institution Building for Queen Elizabeth's visit and cast plastic Mall maps produced and installed around the Mall for the convenience of tourists. Additionally, the OEC assisted the National Museum of History and Technology in the production of the exhibits "A Nation of Nations" and "1876." OEC also produced and installed "A Sacred Room" for the Cooper-Hewitt, the "Golden Door" for the Hirshhorn Museum and Sculpture Garden, a diorama of a carboniferous forest for the National Museum of Natural History, and produced three sets of the "Eagles" exhibit for the Smithsonian Institution Traveling Exhibition Service. During the last half of FY 1976 and the Transition Quarter, OEC completed 163 projects. During the same time, nearly 50 projects--long and short term--were set aside until after the Bicentennial.

SMITHSONIAN INSTITUTION TRAVELING EXHIBITION SERVICE

1976 Actual.....\$101,000
T.Q. Actual.....\$ 54,000
1977 Estimate.....\$104,000
1978 Estimate.....\$206,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	<u>6</u>	<u>2</u>	<u>8</u>
11 Personnel Compensation.....	85	30	115
12 Personnel Benefits.....	8	3	11
21 Travel & Trans. of Persons..	2		2
22 Transportation of Things....		19	19
25 Other Services.....	6	50	56
26 Supplies and Materials.....	<u>3</u>		<u>3</u>
TOTAL	<u>104</u>	<u>102</u>	<u>206</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		2	
Program Funds.....		<u>100</u>	

ABSTRACT - The Smithsonian Institution Traveling Exhibition Service (SITES) provides carefully selected, well-designed, and widely circulated traveling exhibits covering a diversified range in the fields of art, design, science, technology, history, and education. These exhibits include Smithsonian exhibits as well as those organized and lent by numerous Government agencies, individuals, and organizations throughout the world. A program increase of 2 positions and \$100,000 is requested in FY 1978 to enable SITES to develop more exhibitions from Smithsonian collections and to continue to offer these exhibitions at affordable costs. An additional amount of \$2,000 is sought for necessary pay for existing staff.

PROGRAM - SITES, in continuous operation for 25 years, is the only nationwide organization circulating exhibitions of an interdisciplinary curriculum serving specialized and general museums, galleries, and educational and cultural organizations throughout the nation. Supplementing the SITES operating budget for FY 1977 will be an estimated \$430,000 from rental fees and some \$500,000 of special purpose gifts, grants, and contracts.

Approximately eight million people now view SITES exhibitions annually in approximately 1,000 installations. During FY 1976 and the Transition Quarter, 107 exhibitions (including copies and versions of shows) began national tours. Approximately half of these exhibitions featured original objects; the others consisted of panel shows in a variety of formats, mainly "information core" exhibitions--shows that require exhibitors to complete the exhibition through the addition of local artifacts and/or programs. These "information core" exhibitions save transportation costs and foster cooperation between the Smithsonian and the museums throughout the United States. All exhibitions produced were accompanied by a wide variety of supplementary public affairs, educational, and technical materials.



INSTALLATION OF SITES INFORMATION CORE EXHIBIT "RIDE ON" AT OAKLAND MUSEUM,
OAKLAND, CALIFORNIA *(Photograph courtesy of Oakland Museum)*

The following bookings have been scheduled in the first three months of FY 1977:

Alabama	10	Kansas	19	New York	49
Alaska	3	Kentucky	6	North Carolina	13
Arizona	5	Louisiana	8	Oklahoma	11
Arkansas	1	Maine	6	Oregon	8
California	53	Maryland	18	Pennsylvania	35
Colorado	13	Massachusetts	22	South Dakota	2
Connecticut	7	Michigan	19	Tennessee	26
Delaware	2	Minnesota	14	Texas	46
District of Columbia	11	Mississippi	6	Utah	1
Florida	17	Missouri	10	Virginia	12
Georgia	9	Nebraska	4	Washington	6
Idaho	2	Nevada	6	West Virginia	8
Illinois	23	New Hampshire	1	Wisconsin	22
Indiana	18	New Jersey	10	Wyoming	6
Iowa	19	New Mexico	4		

Partial Listing of Exhibitions Beginning Tours
During FY 1977

Based on Smithsonian Collections

First Ladies (5 copies)
Bridges, Tunnels and Hydraulic Works
Black Women (5 copies)
Advertising
America's Visible Past
The Image of Urban Optimism
It's Your Coast - (4 versions)
Folk Arts and Crafts: The Deep South
Pollution
Energy
Ecology
Nation of Nations
Korean Village

Based on Other Sources

Mirage in the West: French View of America
Treasures from Cyprus
Salzburger Festspiele
World Print Competition
French Popular Art
Adam and Eve
The Human Form: Sculpture, Prints and
Drawings by Fritz Wotruba
American Drawings, 1976
20 Polish Textile Artists
Hungarian Art Nouveau
Oliphant: Paintings and Cartoons
Prehistoric Art from Tassili
Belgian Gems

JUSTIFICATION OF \$100,000 INCREASE (Exhibitions) - The first Federal appropriation for SITES was authorized by the Congress in FY 1974. Since that time the Federal appropriation has been used to supplement income derived from rental fees, gifts, grants, and contracts to enable shows to be rented for fees affordable to the majority of users. Prior to FY 1974, about four million persons viewed SITES shows annually. With the addition of Federal funds, more shows have been developed that could be rented at \$200 or less. As a result, the numbers of people who view SITES shows annually have risen from about four million in FY 1974 to some eight million in FY 1976.

Since SITES has received no program increase since FY 1974, it has been necessary to recover soaring production, personnel, and shipping costs through higher rents. In FY 1977, these increased costs will result in more than half the SITES shows having to be rented for more than \$200. It is estimated that without additional Federal support in FY 1978, no new shows can be produced that would rent for under \$200. The following table depicts this trend through FY 1977:

<u>Number of Exhibitions that rent for \$200 and less</u>	<u>Fiscal Year</u>	<u>Number of Exhibitions that rent for more than \$200</u>
29	1973	72
52	1974*	52
68	1975	49
107	1976	70
99	1977 est.	127

The proposed increase of \$100,000 for 2 exhibits specialist positions (\$31,000) and for production support and insurance costs (\$69,000) is needed to enable SITES to continue to produce shows that can be rented for \$200 or less. The goal of holding rental costs down is particularly important to smaller museums, galleries, and educational institutions who have limited financial resources. These same organizations gain most benefit from SITES exhibits since they generally lack exhibitions design and production capabilities of their own. The additional resources will also allow SITES to produce more new shows based on Smithsonian collections. Even with the proposed new resources, approximately 80 percent of SITES' budget would be derived from rental fees and other sources.

* The first year of Federal support for SITES

SMITHSONIAN ARCHIVES

1976 Actual.....	\$211,000
T.Q. Actual.....	\$ 98,000
1977 Estimate.....	\$248,000
1978 Estimate.....	\$272,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	<u>12</u>	<u>1</u>	<u>13</u>
11 Personnel Compensation.....	209	22	231
12 Personnel Benefits.....	20	2	22
21 Travel & Trans. of Persons..	2		2
22 Transportation of Things....	1		1
24 Printing and Reproduction...	1		1
25 Other Services.....	8		8
26 Supplies and Materials.....	4		4
31 Equipment.....	<u>3</u>		<u>3</u>
TOTAL	<u>248</u>	<u>24</u>	<u>272</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		4	
Program Funds.....		<u>20</u>	

ABSTRACT - The Smithsonian Archives is the official memory of the Institution and a valuable research resource for scholars working in the history of American science and in the history of the cultural institutions which are under Smithsonian care. The Archives currently has control over eight million documents and is developing the capacity to control several million additional documents held in research and curatorial areas.

The FY 1978 budget request proposes a program increase of 1 position and \$20,000 to provide an archivist to establish and administer an archival program for the National Museum of History and Technology. Necessary pay in the amount of \$4,000 is sought for existing staff.

PROGRAM - The Smithsonian Institution holds a unique collection of museum objects and archives for research and exhibition. Natural history specimens, art objects, and other collections are interpreted by archival documentation which supplements and explains them. Archival records of the Smithsonian's activities also attract historians and other scholars interested in science and art in the nation's capital from the 1830's to the present. Some eight million documents are now in the central archives, while approximately ten million more under the care of the Archives remain spread throughout the Institution.

The Smithsonian Archives strives to achieve intellectual control over the vast and dispersed archival resources of the Institution amounting to several million documents. In calendar year 1976, the Archives completed records surveys of the then Center for Short-Lived Phenomena (now Scientific Event Alert Network), the Cooper-Hewitt Museum of Decorative Arts and Design, and the Renwick Gallery and continued its records management study of the Office of the Treasurer. Microfilming of the U.S. National Museum accession records continued. Additions to the Archives totaled almost two million documents in calendar year 1976, including the accession records of the United States National Museum; records of the National Museum of Natural History's departments of botany, vertebrate zoology, paleobiology, and entomology; records of the Smithsonian Astrophysical Observatory; and additions to the papers of former Smithsonian Secretaries Spencer F. Baird and Charles D. Walcott. Much remains to be

done in the National Museum of Natural History, but the Archives program established there is continuing to reduce the records backlog.

Major efforts in FY 1977 will be directed toward the records of the National Museum of Natural History and the Smithsonian Astrophysical Observatory.

JUSTIFICATION OF \$20,000 INCREASE (Collections Management) - One position and \$20,000 are requested to assist the Archives in carrying out its archival and records management responsibilities in the National Museum of History and Technology. A records survey conducted in that bureau in 1974 indicated that over one million documents comprising official records of the Smithsonian Institution are in need of preservation. The position requested will enable the Archives to preserve and service these records which have significant historical value.

NATIONAL MUSEUM ACT

1976 Actual.....\$696,000
T.Q. Actual.....\$280,000
1977 Estimate.....\$792,000
1978 Estimate.....\$792,000

(Dollars in thousands)	<u>Base FY 1977</u>	<u>Increase Requested</u>	<u>Est. FY 1978</u>
Number of Permanent Positions..	<u>3</u>	<u>0</u>	<u>3</u>
11 Personnel Compensation.....	41		41
12 Personnel Benefits.....	4		4
21 Travel & Trans. of Persons..	10		10
24 Printing and Reproduction...	3		3
25 Other Services.....	6		6
26 Supplies and Materials.....	3		3
41 Grants.....	<u>725</u>		<u>725</u>
TOTAL	<u>792</u>	<u>0</u>	<u>792</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		0	
Program Funds.....		0	

ABSTRACT - The National Museum Act is a technical assistance program granting funds for specific proposals which advance the museum profession at large through training, research publication, or professional assistance. Through the program, museum personnel have the opportunity to receive training which was not available previously; and a number of important studies, many related to museum conservation, have been undertaken. No program increase for FY 1978 is requested.

PROGRAM - Public Law 94-336, approved July 1, 1976, reauthorized appropriations of \$1,000,000 to the Smithsonian Institution for the National Museum Act for each year through FY 1980. Particular concern is expressed in the legislation for meeting the needs of museum conservation through training, research, and coordination.

Funds appropriated to the Smithsonian Institution for the implementation of the National Museum Act are made available, through grants and contracts, to museums, professional associations, and universities. The National Museum Act Advisory Council, appointed by the Smithsonian Institution, advises and assists the Secretary in determining priorities and assessing the quality of programs seeking support under the Act. The membership of the Advisory Council encompasses the principal museum disciplines-- art, science, and history--and broadly represents all regions of the United States. Only proposals which demonstrate to the Advisory Council thoughtful planning, careful structure, and sound administration receive support. The major aim of the National Museum Act is to provide opportunities for professional growth and research which will be of substantial value to the museum profession.

In FY 1976 and the Transition Quarter, 175 applications for support were received and reviewed, and 75 grants totaling \$893,000 were made. Of these, 23, for a total of \$295,739, involved conservation projects.

In the first three months of FY 1977, 213 applications have been received; 114 of these were reviewed at the November, 1976 Advisory Council Meeting, and 49 grants totaling some \$423,000 were awarded. Eight grants were designated for seminar workshop activities, 16 for conservation studies, 5 for advanced academic degree work, 8 for museum internship programs, and 12 for graduate/professional museum education and training. These grants were distributed among 21 individuals, 10 museums,

15 educational institutions, and 3 professional organizations. The remaining 99 applications, which cover travel/study, professional assistance, and special studies and research, will be reviewed in March, 1977.

The staffs of the National Museum Act and the Office of Museum Programs work closely with individuals, museums, educational institutions, and professional organizations involved in museum training and research activities. Continuous liaison is maintained with the National Conservation Advisory Council (NCAC), funded by the Act, whose aim is to assess the nation's needs in conservation training, research, facilities, and the requirements that could be served by the creation of regional conservation centers. Under support provided in FY 1976, the NCAC studied thoroughly issues related to a national institute for museum conservation in addition to other aspects of conservation and published two initial reports. Additional reports containing further findings and recommendations of the NCAC are currently in process.

SMITHSONIAN INSTITUTION SPECIAL PROGRAMS

These special programs make use of total Institutional resources, including staff research competence and collections and encourage interbureau or interdisciplinary cooperation. They produce outstanding scholarship, presentations, and additional opportunities for public education. After some 10 years of effort, the American Revolution Bicentennial Program will come to a conclusion in FY 1977. These special programs include:

- The American Revolution Bicentennial Program which represented the Institution's efforts to celebrate and portray "The American Experience" will conclude in FY 1977.
- The American and Folklife Studies Program coordinates studies in American civilization, folklife, and folklore. This program has recently been established to provide a focal point for these areas which are dispersed in several bureaus.
- The International Environmental Science Program is designed to shed light on complex biological processes that need to be better understood before solutions to national ecological programs can be determined.
- The Academic and Educational Programs offices conduct interdisciplinary seminar series, coordinate educational programs for students at the elementary and secondary school levels, and provide opportunities for outstanding pre- and postdoctoral investigators to work at the Institution, using staff and collections resources.
- The Research Awards Program enables the Institution to fund new and innovative research projects through a competitive selection process that involves rigorous scientific review.

Full descriptions of these programs appear in the following sections of this budget.

AMERICAN REVOLUTION BICENTENNIAL PROGRAM

1976 Actual.....\$3,749,000
T.Q. Actual.....\$2,051,000
1977 Estimate.....\$ 412,000
1978 Estimate.....\$ -0-

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	<u>2</u>	<u>-2</u>	<u>0</u>
11 Personnel Compensation.....	217	-217	
12 Personnel Benefits.....	21	-21	
21 Travel & Trans. of Persons..	2	-2	
22 Transportation of Things....	37	-37	
24 Printing and Reproduction...	29	-29	
25 Other Services.....	70	-70	
26 Supplies and Materials.....	22	-22	
31 Equipment.....	13	-13	
42 Insur. Claims & Indem.....	<u>1</u>	<u>-1</u>	
TOTAL	<u>412</u>	<u>-412</u>	<u>0</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		0	
Program Funds.....		0	
Nonrecurring Funds.....		<u>-412</u>	

ABSTRACT - FY 1977 will mark the completion of the Smithsonian's special Bicentennial program. This program, culminating some 10 years of effort, consisted of major projects that emphasized the American experience, including exhibitions, the 12 week Festival of American Folklife, symposia, and publications. FY 1977 funds are being used to return objects on loan to the lending institutions, prepare records of Bicentennial projects for the Smithsonian Archives, and complete certain scholarly publications. Additionally, funds to maintain the two largest Bicentennial exhibitions, "A Nation of Nations" and "1876: A Centennial Exhibition," through FY 1977 are included. No funds are requested for this Program in FY 1978.

AMERICAN AND FOLK-LIFE STUDIES

1976 Actual.....\$ 54,000^{/1}
T.Q. Actual.....\$ 14,000^{/1}
1977 Estimate.....\$133,000
1978 Estimate.....\$233,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	<u>4</u>	<u>0</u>	<u>4</u>
11 Personnel Compensation.....	116	9	125
12 Personnel Benefits.....	11	1	12
21 Travel & Trans. of Persons...	1	3	4
24 Printing and Reproduction....	1	25	26
25 Other Services.....	2	30	32
26 Supplies and Materials.....	2	22	24
31 Equipment.....	<u> </u>	<u>10</u>	<u>10</u>
TOTAL	<u>133</u>	<u>100</u>	<u>233</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		0	
Program Funds.....		100	

ABSTRACT - The American and Folklife Studies Program is engaged in the study and presentation of the material culture of American civilization and the folklife and folklore traditions of the United States. In FY 1978, an increase of \$100,000 is requested to support continued research, performances, collecting, and publications in the field of folklife.

PROGRAM - The establishment of the American and Folklife Studies Program marks the first time these activities have had one focal point in the Institution. Prior to FY 1977, the Office of American Studies and the Folklife unit were displayed under the Office of the Assistant Secretary for History and Art and the Division of Performing Arts respectively. This new alignment reflects a commitment to analyze the strengths, weaknesses, and scholarly content of the Smithsonian's program activities pertaining to folklore and popular culture including the annual Festival of American Folklife. Moreover, the combination of these heretofore separate entities is designed to develop an increasingly coherent program of research, publication, exhibitions, performances, and collecting in these areas.

Guiding this evaluation and planning effort is a Folklife Advisory Council drawn from Smithsonian museums and offices involved in folklife matters as well as two outside folklife scholars. The Council, chaired by the Director of the Office of American Studies, is comprised of folklife specialists, anthropologists, linguists, sociologists, musicologists, and curators.

The Office of American Studies, in addition to providing leadership and guidance to the Folklife review and planning effort, is maintaining its programs of graduate education in the material aspects of American civilization. These draw upon Smithsonian collections and scholars as resources.

JUSTIFICATION OF \$100,000 INCREASE - In FY 1978, the Institution will continue to research and publish the materials accumulated from the annual Mall Folklife Festivals produced during the period 1967-1976. Publications will take the form of monographs, disc recordings, films, and video-tapes for use by folklorists, other academics, and the general public. The effort brings together the Institution's working experience in festival production and serves as a basis for continued Institutional involvement in small, museum-related folk presentations.

^{/1} Office of American Studies.

Initial research and writing projects encompass a printed history of the Festivals; monographs on immigrant and ethnic lore; disc recordings comparing old and new world musical traditions, and bow instruments such as the guitar and fiddle; and video-tape studies of cross-cultural traditions including the Southern black, Scottish, English, and Western African children's games. In future years, the Institution will coordinate and strengthen its research activities in the area of folklife and folklore. Research will be supplemented by periodic performances, utilizing folk artists and practitioners from around the country, as well as the Institution's collections and curatorial interests.

An amount of \$100,000 is requested to fund costs of contractual arrangements, supplies, materials, travel, equipment, and temporary and part-time employment for programs of research, collecting, publication, and performance throughout the Institution.

INTERNATIONAL ENVIRONMENTAL SCIENCE PROGRAM

1976 Actual.....	\$333,000
T.Q. Actual.....	\$ 50,000
1977 Estimate.....	\$373,000
1978 Estimate.....	\$375,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	<u>2</u>	<u>0</u>	<u>2</u>
11 Personnel Compensation.....	157	2	159
12 Personnel Benefits.....	15		15
21 Travel & Trans. of Persons..	30		30
22 Transportation of Things....	2		2
23 Rent, Comm. & Utilities.....	3		3
25 Other Services.....	105		105
26 Supplies and Materials.....	42		42
31 Equipment.....	<u>19</u>		<u>19</u>
TOTAL	<u>373</u>	<u>2</u>	<u>375</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		2	
Program Funds.....		0	

ABSTRACT - The International Environmental Science Program is designed to coordinate the special abilities of the Smithsonian's science bureaus to study those ecosystems now under stress from human interference. Research undertaken in this Program is interdisciplinary, team-oriented and hence does not duplicate other research undertaken by the bureaus. Scientists are identifying key indicators of ecosystems, such as the amount of nitrates in a stream to improve the predictability of environmental changes. Such predictions, when possible, can result in wiser management decisions for protecting our disappearing renewable resources--such as the number of fish in an estuary or the quality of hay in a field. Smithsonian scientists have been emphasizing the study of subtropical and tropical ecosystems because these are the most fragile and are areas where important alternative natural resources can be found to alleviate food shortages and the development of energy sources. In this way, it may be possible to learn what is necessary to conserve endangered species (including plants) and critical habitats. No program increase is sought for FY 1978. Necessary pay in the amount of \$2,000 is requested for existing staff.

PROGRAM - The International Environmental Science Program was established in FY 1976 by combining the closely related Environmental Science and International Environmental Programs. The Environmental Science Program was established in FY 1971 as a multi-bureau, interdisciplinary effort to monitor ecosystems at two specific Smithsonian research facilities--the Tropical Research Institute in Panama and the Chesapeake Bay Center for Environmental Studies in Maryland. The International Environmental Program consisted of an interbureau, interdisciplinary effort aimed at studying various ecosystems in the tropics and subtropics. The Smithsonian Institution is uniquely qualified to undertake this type of research since it has both traditional expertise in international environmental research and the capability to sustain scientific programs on the necessary long-term basis. The establishment of this program has enabled the Smithsonian, which has approximately 40 to 60 scientists doing individual field work overseas at any one time, to maximize its resources in those regions that are of pan-Institutional interest.

Staff resources consist primarily of specialists from several Smithsonian bureaus--the National Museum of Natural History, National Zoological Park, Radiation Biology Laboratory, Tropical Research Institute, and the Chesapeake Bay Center for Environmental Studies--as well as faculty and pre- and postdoctoral students from U.S. universities and research organizations abroad. The most intensive and detailed studies are based at two of the Smithsonian's permanent facilities. At the Tropical Research Institute, a tropical forest on Barro Colorado Island and an intertidal coral reef at Galeta Point are the focus of close ecological monitoring. For comparative purposes, an equally intensive study is underway on a temperate estuary and its watershed in the Rhode River at the Chesapeake Bay Center for Environmental Studies. The other elements of the International Environmental Science Program network are at non-permanent facilities in the tropics where the goal is to involve host country nationals to the degree where they will ultimately support the research centers themselves.

Projects are currently being carried out on the marine ecosystem of the Galapagos Islands, Ecuador; the Fly River region and tropical highlands of Papua New Guinea; the Amazonian region surrounding Manaus, Brazil; the savanna and forest sites of northern and central Venezuela; and Chitawan National Park in the terai of Nepal. At the majority of these sites, scientists have keyed their research on endangered species and the critical habitats which they inhabit. Assisted by the advanced work done at the permanent Smithsonian sites, important contributions have already been made by field biologists at these overseas projects to the better management of such threatened animals as the big cats of Asia and New World primates and reptiles. Effective management decisions are possible only because the entire habitat is under interdisciplinary study.

ACADEMIC AND EDUCATIONAL PROGRAMS

1976 Actual.....\$618,000
 T.Q. Actual.....\$187,000
 1977 Estimate.....\$652,000
 1978 Estimate.....\$707,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	12	0	12
11 Personnel Compensation.....	208	5	213
12 Personnel Benefits.....	20		20
21 Travel & Trans. of Persons...	6		6
23 Rent, Comm. & Utilities.....	1		1
24 Printing and Reproduction....	29		29
25 Other Services.....	382	50	432
26 Supplies and Materials.....	5		5
31 Equipment.....	1		1
TOTAL	652	55	707
<u>Analysis of Increase</u>			
Necessary Pay.....		5	
Program Funds.....		50	

ABSTRACT - A major Smithsonian objective is to make its resources for learning (collections, professional staff, libraries, and laboratories) available to the general public and the formal education community. These efforts take the form of programs in higher education, symposia and seminars, and activities at the elementary and secondary education level. The FY 1978 budget requests an increase of \$50,000 to strengthen the program of higher education. A further \$5,000 is sought for necessary pay for existing staff.

PROGRAM - I. Office of Academic Studies: The National Collections in the Smithsonian's care and the scholars of humanities and science who curate and study them represent a major resource for specialized study in many disciplines. The Academic Studies Program is designed to offer individual research training at small cost per individual to scholars who will benefit by access to Smithsonian staff and collections.

In universities and colleges, the education process relies heavily on the study of library materials. In contrast, at the Smithsonian students work directly with historical and anthropological objects, original works of art, natural history specimens, living animals, plants, and ecological systems--in the museums, at the National Zoological Park, and in the field. Because of this difference, the Smithsonian's fellowship program is an important adjunct to university education. For example, in the museums, it is possible to study the development of technology by examining actual tools and machines ranging from ancient bone and flint objects to collections of farm tools and machines which chronicle the development of American agriculture. The collections of living animals maintained by the National Zoological Park in Washington and at Front Royal as well as animals observed in Smithsonian natural preserves in Panama and the Chesapeake Bay area allow intensive studies of many poorly understood and endangered species, studies that assist in the worldwide effort to save these species from extinction.

Smithsonian fellows in turn help to make the Institution's national resources available to the larger academic community through publications and teaching. Past fellows are regularly contacted after several years to learn the long-term results of their study at the Smithsonian. Extensive publication is common; for example, this

year's survey revealed an average of five books and articles by each fellow resulting directly from his or her work at the Smithsonian. The surveys also reveal that more than half of the fellows go into teaching in community colleges and large universities. Other fellows enter industry and government service as scientific advisors.

Fellows also provide an intellectual stimulus to the work of the Smithsonian's own curators and scientists by offering new ideas during their period of residency. Many lasting collaborations are begun during a fellowship year and sustained through correspondence, visits, and joint publications. Since 1965, as a major part of its higher education programs, the Smithsonian offered support to 272 Ph.D. candidates and to 262 postdoctoral scholars.

II. Office of Smithsonian Symposia and Seminars: The Office of Smithsonian Symposia and Seminars continued its Bicentennial program "Kin and Communities: The Peopling of America" into 1977. The Institution's sixth international symposium, scheduled for June 14-17, 1977, will reflect on the role of family institutions and communities in shaping the nation during its first two hundred years and as continuing links to African, Asian, European, and other cultures (including those of the American Indian) which have enriched American civilization. Dr. Margaret Mead, American Museum of Natural History, is honorary chairperson of the two-year program, which began with public lectures, workshops, and discussion groups on June 14-16, 1976. Currently the Office is assessing the merits and value of a variety of themes for possible programs in the near future. Examples of such themes include short-term evolutions; ethical and social aspects of microadaptation; artists and their metals; the metric system; play and inventiveness; and new frontiers for exploration such as space and the sea.

III. Office of Elementary and Secondary Education: A major objective of the Office of Elementary and Secondary Education is to make Smithsonian resources for learning available to the local school community. Program activities include planning and conducting teacher workshops, developing audio-visual materials, preparing school publications, and supervising a teacher's resource center. The preparation of materials for a national teacher audience is also of high priority.

To encourage cooperation and exchange of information among the Smithsonian education offices and between those offices and local schools, the Office continues to offer a number of programs. Two publications--Let's Go (a monthly newsletter) and Learning Opportunities for Schools (an annual brochure)--are used to inform teachers about the variety of Smithsonian services and suggest ways of using museums as educational resources. A workshop and seminar program for local teachers is now in its fifth year. During FY 1976, a total of 2,500 teachers participated in 84 workshops and seminars, including three summer courses enabling the development of curriculum units based on Smithsonian resources. Ongoing summer workshops include an orientation program entitled "Tuesdays at the Smithsonian"; a one-week seminar on museum teaching methods; and a three-week course on applying Smithsonian teaching methods in the classroom.

To share Smithsonian teaching concepts with a national teacher audience, a new publication, entitled Art to Zoo, will be distributed without cost to some 7,000 elementary schools throughout the United States and a series of regional workshops for school and museum educators will be given in conjunction with the publication.

Other important activities of the Office include the chairing of a special Smithsonian committee to consider the special needs of handicapped visitors and employees and to promote increased accessibility to exhibition galleries and education programs; operating a resource center, which circulates printed and audio-visual materials relating to museum education staff throughout the Institution; and sponsoring a Docent Roundtable which brings together volunteer guides from the various Smithsonian museums to learn of the work of their colleagues.

JUSTIFICATION OF \$50,000 INCREASE (Education and Public Orientation) - Research opportunities offered at the Smithsonian are not available in universities. The varied and specialized collections available in the Institution combined with the guidance of scholars on the staff are especially valuable in training pre- and postdoctoral students. The National Air and Space Museum, the Hirshhorn Museum and Sculpture Garden, and recently enlarged facilities, such as those of the National Zoological Park, offer many new opportunities for research. An increase in the number of fellowships currently supported by the Academic Studies program, from 40 to 46, will permit the opening of these new resources to more, qualified scholars, many of whom will become teachers of succeeding generations of students. An increase of \$50,000 is requested for 6 new fellowship appointments.

SMITHSONIAN RESEARCH AWARDS PROGRAM

1976 Actual.....\$ 53,000
T.Q. Actual.....\$101,000
1977 Estimate.....\$390,000
1978 Estimate.....\$450,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	0	0	0
41 Grants.....	390	60	450
TOTAL	390	60	450
<u>Analysis of Increase</u>			
Necessary Pay.....		0	
Program Funds.....		60	

ABSTRACT - The Research Awards Program was initiated in FY 1966 to finance new and innovative research projects. Since FY 1966, over 325 such projects have been funded through this Program and have resulted in more than 300 publications. An increase of \$60,000 is requested for FY 1978 to permit the continuation of this vital means of sustaining new research approaches under rigorous scientific review. The requested amount will restore the Program to the FY 1976 level of funding.

PROGRAM - Prior to FY 1966, Smithsonian Institution scientists competitively applied for funds from the National Science Foundation (NSF) to undertake individual research projects. In 1964, the Congress limited the authority of the NSF to make grants for scientific research to individual Federally employed scientists. The Research Awards Program was begun in FY 1966 with an appropriation of \$350,000 to respond to the importance of supporting individual research projects of Smithsonian staff scientists.

The funding provided under this Program permits the Institution's professional staff members to undertake new or supplementary research projects that complement, augment, or reinforce the work of their own bureaus. Scientists at the Smithsonian Institution have certain specific duties, such as curating collections, developing exhibits, responding to public inquiries, and participating in various educational efforts such as supervising predoctoral and postdoctoral students and summer interns. Moreover, the research portions of most units' budgets are mainly allocated for curatorial functions and the development of exhibits with a limited amount reserved to cover a generally small but sustained research effort on the part of each professional. However, the nature of research is such that new and exciting lines of investigation are continually being discovered. Some of these will eventually be incorporated into the long-term research plan of the units. Others, however, are more appropriate for immediate investigation with modest financial support in order to determine the longer-term potential of a particular line of inquiry, or because a project is of much more finite scope. The Research Awards Program provides the resources and the opportunities for professional staff scientists to pursue promising lines of inquiry and sustain this inquiry. The Program thereby fulfills the function provided by the National Science Foundation to the research community in industry and at colleges and universities, namely, to support those investigations that are judged to be of special significance by an evaluation of experts in the field.

Under the Research Awards Program, proposals are submitted each year by members of the professional scientist staff of the Smithsonian who desire support for new or innovative projects. To ensure equity in the selection process, proposals are reviewed for scientific and scholarly worth by an outside advisory committee of senior scientists. The committee approves projects for funding strictly on the basis of merit, with

the proviso that large scale projects are normally not considered. Examples of projects funded under this Program include research on bees leading to the increased production of the squash crop; the development of techniques to control North American Sessid moths, which are extremely damaging to orchids, without damaging other insect populations or crops; field and laboratory studies of young and active volcanoes such as those in Costa Rica to understand how they form and their eruption patterns; and analyses of coral reefs on which are found some of the most diverse animal and plant life in the world.

JUSTIFICATION OF \$60,000 INCREASE (Research) - The Research Awards Program has not been granted a funding increase since FY 1973. In FY 1977, the base was reduced from \$450,000 to \$390,000--less than the amount appropriated in FY 1971. The Institution places a high priority on this Program. The fact that over 300 publications have resulted from the approximately 325 research projects thus far supported bears firm evidence of the benefits derived from these modest funds. Moreover, the outside peer review aspect of the selection process and the opportunities afforded Smithsonian scientists to pursue new directions apart from their unit-related duties have helped to sustain the high quality of Smithsonian research efforts. An increase in the amount of \$60,000 is requested for FY 1978 which would restore the Program to the FY 1976 level.

ADMINISTRATION

1976 Actual.....\$4,787,000
T.Q. Actual.....\$1,631,000
1977 Estimate.....\$5,289,000
1978 Estimate.....\$5,637,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	<u>217</u>	<u>4</u>	<u>221</u>
11 Personnel Compensation.....	4,390	208	4,598
12 Personnel Benefits.....	421	20	441
21 Travel & Trans. of Persons..	37	3	40
22 Transportation of Things....	1		1
23 Rent, Comm. & Utilities.....	84	33	117
24 Printing and Reproduction...	14	5	19
25 Other Services.....	189	75	264
26 Supplies and Materials.....	91	17	108
31 Equipment.....	52	-13	39
Acquisitions for Collections	6		6
41 Grants.....	<u>4</u>	<u> </u>	<u>4</u>
TOTAL	<u>5,289</u>	<u>348</u>	<u>5,637</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		75	
Program Funds.....		295	
Nonrecurring Funds.....		-22	

ABSTRACT - Administration Activity provides for the overall direction of the Smithsonian Institution, for legal services, for managing its administrative support, including financial, personnel, facilities, and computer services, and for the maintenance of internal controls. The request for Administration in FY 1978 totals 221 permanent positions and some \$5,600,000 including requested program increases of 4 positions and \$295,000. Two of these additional positions and \$33,000 are requested for an architect/planner and clerical support in the Office of Facilities Planning and Engineering Services; 1 position and \$13,000 are sought for a contract specialist in the Office of Supply Services; and 1 position and \$20,000 are proposed for a management analyst in the Management Analysis Office. The remaining \$229,000 is needed to fund the position of Assistant Secretary for Administration, strengthen the Institution's Upward Mobility Program, and purchase essential supplies, equipment, services and training, the costs of which have increased substantially during the past few years. A further amount of \$75,000 is required for necessary pay for existing staff. These proposed increases are offset by the nonrecurrence of \$22,000 appropriated for the purchase of equipment in FY 1977.

PROGRAM - The Administration Activity is comprised of the following components:

(a) the Secretary of the Smithsonian Institution and his immediate office, including the Assistant Secretary for Administration, the Secretary's Files, the Director of Support Activities, the Travel Services Office, and the Curator of the Smithsonian Institution Building;

(b) the Office of the General Counsel;

(c) the Office of the Treasurer, including the Accounting Division; the Office of Programming and Budget; the Grants and Insurance Administration Division; the Business Management Office; and Investment Accounting Division;

- (d) the Office of Personnel Administration;
- (e) the Office of Audits;
- (f) the Office of Equal Opportunity;
- (g) the Office of Computer Services;
- (h) the Office of Supply Services;
- (i) the Management Analysis Office; and
- (j) the Office of Facilities Planning and Engineering Services.

Within this Activity, the Office of the Secretary with the assistance of the Office of the Assistant Secretary for Administration is responsible for planning, implementing, and reviewing the progress of all programs of the Institution.

The Office of the General Counsel provides all legal services for the Smithsonian which combine those arising from the operation of a university-like, charitable corporation with those common to Government organizations.

The Office of the Treasurer has primary responsibility for Smithsonian financial and accounting functions. These include overall direction for financial planning and budgeting, accounting and financial reporting functions, administration of grants and insurance, management of certain auxiliary activities such as the Museum Shops, bank relations, and oversight for handling of investments.

The Office of Personnel Administration is responsible for recruitment, placement, position classification, and equal opportunity as it relates to personnel management. The Office also has the responsibilities for employee training and development, labor-management relations, and for implementing new laws and policies.

The Office of Audits, established in FY 1970, is responsible for performing all internal auditing functions of the Smithsonian Institution. With more than 50 Federal operating units, programs, and staff offices, several major appropriation accounts (totaling about \$93 million in FY 1976), and several auxiliary activities and a wide variety of other funds, prudent management requires a continuing schedule of audit reviews.

The Equal Opportunity Program, established by Executive Order 11246 and further implemented by the "Equal Employment Opportunity Act of 1972" (P.L. 92-261), requires the Smithsonian to conduct a positive action program which will provide true equality in all Smithsonian employment practices. It is the responsibility of the Office of Equal Opportunity to conduct such a program. Major efforts currently underway include counseling, upward mobility, a Women's Program, a Sixteen Point Program for the Spanish-speaking, and ensuring equality of opportunity through affirmative action.

The Office of Computer Services is responsible for developing automated administrative and collections management systems and works with curators, historians, scientists, and management personnel to apply mathematical techniques to research problems.

The Office of Supply Services procures supplies, materials, contractual services and equipment for research, curatorial, exhibits preparation, and other Smithsonian activities. The Office also maintains all property records and schedules and oversees periodic inventories to ensure proper accountability and security.

The Management Analysis Office performs a wide range of general management staff assistance and advisory services related to museum, research, and support operations in the Smithsonian. The Office provides management advisory services, makes studies of systems and procedures particularly as they relate to proposed administrative instructions and assists in the evaluation and analysis of management problem areas.

The Office of Facilities Planning and Engineering Services provides professional architectural and engineering services for the buildings and facilities management function, including long and short range planning, engineering analysis, design, cost and budgetary estimates, contract supervision, construction management, engineering analysis, and general construction administration.

JUSTIFICATION OF \$295,000 INCREASE (Administration):

Office of the Secretary - (+ \$51,000) - These funds are required to fund salary and related support costs for the newly-established Assistant Secretary for Administration. This position advises and assists the Secretary, his other principal assistants, and the heads of bureaus and offices in the overall formulation, performance, and evaluation of Institutional activity. Included in these general oversight responsibilities are a broad range of matters including planning, development of objectives and priorities, organization and staffing, budget formulation and review, and the study and evaluation of ongoing and new activities with special emphasis on the relationships among bureaus and offices.

Office of the General Counsel - (+ \$23,000) - For several years, while the requirements for legal services have materially increased in volume and complexity principally in the areas of contracts, employee relations, and tort claims, there has been only a modest increase in legal staffing. To relieve the legal and support staff of some of its more routine work, an amount of \$8,000 is requested for the employment of a part-time law clerk and part-time secretarial assistant. An additional \$15,000 is sought to meet the essential needs of the Office for maintenance of a law library, attendance at seminars by the legal staff to keep abreast of developments in the law, and basic supplies and materials.

Office of the Treasurer - (+ \$30,000) - Since 1974, the Accounting Division has taken steps to automate and improve the Institution's accounting system. In FY 1974, a direct key-to-disk data entry system was installed to keep pace with the mounting number of voucher, payment, and receipt transactions that it is required to handle. This process of mechanization has resulted in the elimination of repetition in handling payment documents, reduction of errors, and faster payment of invoices. In October, 1976, the initial phase of a new accounting system was implemented. This new system principally integrated the heretofore separate Federal, grant and contract, and restricted and unrestricted trust fund accounting classification structures, thereby providing a common data base for all financial management functions. To keep pace with the expanded accounting needs of the Institution, additional computer time is necessary. An amount of \$30,000 is requested for this purpose.

Office of Personnel Administration - (+ \$45,000) - In the past few years, the cost of support items has risen substantially without commensurate increases in funding. The proposed increase of \$45,000 will be used for necessary training for Smithsonian professional and support staff; rental of a larger capacity electrostatic photocopier to handle increased volume resulting from an expansion in program activity; purchase reprints of the Civil Service Commission classification standards; support existing staff; and fund the cost of other day-to-day printing and office supplies.

Office of Equal Opportunity - (+ \$12,000) - With funding and positions provided in the FY 1977 appropriation, the Institution established a "resources pool" to augment its Upward Mobility Program. Under the pool approach employees selected for

Upward Mobility training are funded from the resource pool, thus enabling the units to fill the position vacated by the trainee. Following a training period ranging from six months to one year, the employee is placed in an existing vacancy. At that time, the trainee's position and funds revert to the resources pool for reassignment to a new Upward Mobility candidate. An additional amount of \$12,000 is requested to strengthen this program.

Office of Computer Services - (+ \$36,000) - In FY 1976, the Office of Computer Services began to install direct-data-entry terminals in several functional areas of the Institution. The installation of these remote terminals allows users such as the Library, Office of Personnel, and the Conservation-Analytical Laboratory to feed information directly to centrally located processing equipment. This method of processing saves time and improves accuracy by eliminating repetitive transcription of information prior to its entry into the computer. An amount of \$15,000 is requested to expand current OCS equipment (e.g., disk memory storage capacity) to accommodate the installation of additional terminals in other areas within the Institution.

Certain older, but essential, data processing devices such as card sorting, card reproduction, plotting, and keypunching equipment have been requiring frequent repair, often at critical processing times. When new, incidents of malfunctions of these devices were minimal and thus maintenance contracts were not purchased. Now to ensure the uninterrupted performance of this equipment and preclude the alternative of purchasing expensive new equipment, an amount of \$6,000 is requested to purchase full maintenance service contracts.

During the past several years, the Institution has experienced a greater need for an interactive computer processing (e.g., time-sharing) capability to serve the needs of business managers as well as individual researchers. Such an interactive capability, not now provided by the current computer, would allow a user to work directly with a computing system without the delays and interruptions posed by coding, keypunching, batch processing, and slow turn-around time. In the business management area, such as Museum Shop operations, this capability would permit much quicker and more accurate processing in areas where up-to-date information is particularly important. In the research area, this capability would allow scientists, historians, and others to follow individual lines of investigation by personally performing calculations or comparisons in one continuous mental process, submitting data, getting results, testing hypotheses, and if necessary revising the approach. Funding of \$15,000 is sought to provide this capability either by the purchase of commercial services or by the leasing of equipment on a cost-shared basis with user units, whichever is determined to be the most cost effective.

Office of Supply Services - (+1 position and \$25,000) - There has been a significant increase during the past year in the contract, grant and procurement actions that this Office is required to process, and present indications point toward the continuation of this growth in FY 1977 and FY 1978. To keep pace with this mounting workload and cope with the greater complexity of contract administration, one new contract specialist and \$13,000 are sought.

The continued effect of inflation on the ability to fund stockroom inventories necessitates the request for an additional \$12,000 to purchase and stock essential supplies needed to support research, curatorial, and exhibits-related activities in the Washington area.

Management Analysis Office - (+1 position and \$28,000) - The Institution has grown substantially over the past several years. This expansion in program and support activities has resulted in directives, policies, and procedures that relate to such areas as personnel, accounting, data processing, and safety regulations. Many of these directives need to be reviewed and updated on a continuing basis to satisfy

regulations and Smithsonian policy and to provide managers, employees, and the public with needed reference guides. An additional position for a management analyst (\$20,000) is requested to review and consolidate current issuances and to make recommendations on the development of a comprehensive set of published management-approved directives. An additional amount of \$8,000 is sought to purchase supplies and materials and rent copier equipment for this Office necessitated by a recent relocation away from the Mall.

Office of Facilities Planning and Engineering Services - (+2 positions and \$45,000) - During the past four years, since the establishment of the Office of Facilities Planning and Engineering Services (OFPES), there has been a strong emphasis placed on improved management methods to ensure the cost effectiveness of construction projects, a planning capability to forecast needs accurately, and maximum efficient use of existing facilities. During FY 1977, OFPES was involved in approximately 300 projects requiring architectural and engineering expertise. To provide the proper support and attention to existing repair and renovation projects as well as projects in the developmental stages, an additional architect/planner (\$23,000) is requested. With the rapid price increases experienced over the past several years, it is particularly important to have the professional staff and expertise to ensure careful program planning and monitoring.

A clerk typist (\$10,000) is also sought in the construction management function to provide support for reviewing, processing, documenting and recording contract actions, such as change orders, claims, delays, amendments, and payment requests. This position is needed to keep pace with the volume of work and ensure the accuracy of contract supervision.

Support funds in the amount of \$12,000 are requested to meet increased costs of printing and reproduction for architectural and engineering plans and specifications, equipment rentals, contract services, office supplies and materials, equipment such as drafting tables, engineering equipment, and travel for the development of plans and designs and for construction contracts supervision away from Washington, D.C.

OFFICE OF PRINTING AND PHOTOGRAPHIC SERVICES

1976 Actual.....\$835,000
 T.Q. Actual.....\$210,000
 1977 Estimate.....\$897,000
 1978 Estimate.....\$931,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	<u>39</u>	<u>0</u>	<u>39</u>
11 Personnel Compensation.....	609	8	617
12 Personnel Benefits.....	59	1	60
21 Travel & Trans. of Persons..	2		2
22 Transportation of Things....	1		1
23 Rent, Comm. & Utilities.....	10	5	15
24 Printing and Reproduction...	4	1	5
25 Other Services.....	62	15	77
26 Supplies and Materials.....	124		124
31 Equipment.....	<u>26</u>	<u>4</u>	<u>30</u>
TOTAL	<u>897</u>	<u>34</u>	<u>931</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		9	
Program Funds.....		25	

ABSTRACT - The Office of Printing and Photographic Services (OPPS) is the Institution's central office for technical advice, guidance, and production in all matters concerning photographic, duplicating, and inhouse printing services. The Office coordinates photographic and printing activities and supplies technical support to the curatorial, scientific, technical, and administrative staffs. It also provides photographs, slides, and transparencies with lectures to the general public, schools, research foundations, educational publications, other museums, and government agencies. An increase of \$25,000 is requested in FY 1978 for additional computer services and to defray higher processing and printing costs of commercial firms and the Government Printing Office (GPO). An additional amount of \$9,000 is sought for necessary pay for current staff.

PROGRAM - OPPS provides photographic, printing, and other reproduction services in support of research, collections management, and public education. Photographic services include studio and on-site photography, photographic copy restoration, processing and printing, filing and retrieval of negatives, preparing responses to public inquiries, and filling orders. In FY 1976, the Office processed some 200,000 color slides and transparencies and produced more than 200,000 black and white prints.

Printing and reproduction services include the production of certain exhibit catalogues, education pamphlets, and information leaflets. In addition, OPPS prints and reproduces a variety of manuals, reports, specimen labels, and administrative directives. These services are accomplished through the use of Smithsonian multilith, electrostatic copier, and letterpress equipment.

JUSTIFICATION OF \$25,000 INCREASE (Printing and Reproduction) - An additional \$25,000 is requested for several support cost items. Of this amount, \$15,000 is required to defray a GPO rate increase for its services in OPPS's Printing Branch; \$5,000 is required to fund costs for additional computer usage associated with management programs, reproduction, and other services; \$4,000 will be used to replace worn-out cameras; and \$1,000 is needed to cover higher prices for processing done by commercial photographic firms.

OFFICE OF PROTECTION SERVICES

1976 Actual.....\$6,282,000
T.Q. Actual.....\$2,422,000
1977 Estimate.....\$7,684,000
1978 Estimate.....\$8,268,000

(Dollars in thousands)	<u>Base FY 1977</u>	<u>Increase Requested</u>	<u>Est. FY 1978</u>
Number of Permanent Positions..	<u>527</u>	<u>20</u>	<u>547</u>
11 Personnel Compensation.....	6,508	405	6,913
12 Personnel Benefits.....	625	39	664
21 Travel & Trans. of Persons..	9	6	15
23 Rent, Comm. & Utilities.....	7		7
24 Printing and Reproduction...	3		3
25 Other Services.....	307	20	327
26 Supplies and Materials.....	207	4	211
31 Equipment.....	<u>18</u>	<u>110</u>	<u>128</u>
TOTAL	<u>7,684</u>	<u>584</u>	<u>8,268</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		109	
Program Funds.....		475	

ABSTRACT - The Office of Protection Services (OPS) is responsible for the security protection, fire, safety, and health programs of the Institution. An increase of 20 positions and \$475,000 is requested for FY 1978 to meet the following requirements: (1) Protection of Galleries and Exhibitions--\$215,000 for 20 new guard positions for new halls, galleries, and exhibitions; \$40,000 for related support costs; and \$120,000 to adjust the base resources which are insufficient to allow all currently authorized positions to be filled; and (2) Proprietary System--\$100,000 to continue the conversion to a Smithsonian-owned electronic security system. An amount of \$109,000 is also sought for necessary pay for existing staff.

PROGRAM - The Office of Protection Services provides security, fire protection, safety and health services to the visitors (over 16,000,000 in FY 1976), employees (over 4,000) and collections of the 10 major museums and art galleries, and various other Smithsonian facilities in the Washington, D.C. area as well as the Cooper-Hewitt Museum in New York City. The OPS also provides technical and advisory services to the National Zoological Park, the Smithsonian Tropical Research Institute, and the Chesapeake Bay Center for Environmental Studies. These responsibilities are carried out pursuant to Public Laws 82-206 and 88-391 related to the policing of the buildings and grounds of the Smithsonian Institution and its constituent bureaus, and Public Law 91-596 and E.O. 11807 which deal with occupational health and safety.

The OPS carries out its mission through a staff of guards and special police officers who guard and protect the facilities, staff, and visitors and enforce laws on Smithsonian property; safety officials who administer occupational safety and health; medical staff who administer services to staff and visitors; technical personnel who work with electronic and other physical security systems; and administrative support personnel who are involved in managing the operation (including personnel, budget, training, investigative and clerical functions, and the like).

The fundamental responsibility of OPS is to provide security to the exhibits and collections that are open to the public. Staffing needs and budget requirements for guarding are based on the designation of "posts." A post may be either one point (for example, an entrance to a museum), or an area, varying in size, based upon: the

use of the area; crowd conditions; the value of objects on display; the vulnerability of those objects to accidental damage, theft, and vandalism; the effective field of vision of the assigned protection personnel; and the ability to employ electronic protective systems. The number of persons required to staff one post may vary from one (the post must be staffed eight hours a day, five days a week), to five (the post must be staffed 24 hours a day, seven days a week). In addition to protecting the collection from theft and vandalism, members of the guard force must be able to recognize fire hazards, identify insect or rodent infestations, report environmental problems and facility conditions, as well as act as information resources for the many visitors to the museums.

Other functions of OPS include fire and safety inspection; safety management; automatic detection for fire and burglary; and police operations to prevent or detect violation of regulations of the Institution as well as Federal, state, and local laws. In addition, a Health Services program is directed and operated by a Medical Officer, and 4 full-time and 3 part-time nurses. This staff operates a central health unit in the Museum of History and Technology and smaller first aid units in the National Museum of Natural History, the Hirshhorn Museum and the National Air and Space Museum. The health services staff is involved in health care for the employees of the Smithsonian and is available to all visitors in the event of emergencies. The establishment of a comprehensive health services program is currently in the development phase and should be completed this year.

During FY 1976, the first comprehensive Institution-wide policies on security, safety, and health were completed, and fire engineering surveys were conducted in all major facilities identifying specific needs for fire detection and control systems. A study of locking and keying systems at the Smithsonian is now taking place. Recommendations are anticipated by mid-FY 1978.

The development of a Smithsonian-owned and operated alarm system and communication control center is well underway with the renovation of the space for the Center and the initial installation of the first monitoring equipment. By converting from the current use of leased, externally-maintained equipment and systems, the Institution will enhance its ability to detect and handle emergency situations in the fastest possible time. By early FY 1978, it is planned that three major Smithsonian facilities (the Smithsonian Institution Building, the Arts and Industries Building, and the Freer Gallery of Art) will be linked with the Control Center. This system will eventually cover all Smithsonian museums in the District except the National Zoological Park.

The number of misdemeanor and felonious incidents committed in calendar year 1976 totaled 313, about the same number as in 1975. Special efforts which contributed to holding down crime included the use of canine teams after hours and the deployment of plainclothes officers.

JUSTIFICATION OF \$475,000 INCREASE (Protection):

Protection of Galleries and Exhibitions - Many new halls, galleries, and exhibitions, which opened in FY 1976 as part of the Smithsonian's Bicentennial observance, will remain open for several years for the public's education and pleasure. Included in this category are the "Nation of Nations" exhibit (with a new terrace entrance) in the History and Technology Museum, the Portrait Gallery's new third floor gallery, and the "1876" exhibition in the Arts and Industries Building. Certain of these spaces were not previously open to the public. In other cases, the scope, layout, and contents of the new exhibits require more extensive protection. Through the Transition Quarter, protection services for these areas were funded by the Special Bicentennial Program. To provide a minimum level of coverage in these spaces, guards must now be reassigned from other posts--an action which severely limits effective coverage in those areas as well. An increase of 20 positions (\$215,000) and \$40,000

in support funds for services, supplies, travel, and equipment is requested to provide long-term coverage in these areas. The 20 positions will be used to staff 12 additional seven-day posts.

A further amount of \$120,000 is requested to eliminate the deficit that has occurred in this Office's base resources. Costs for essential support items such as uniforms, security equipment maintenance, and guard office supplies have risen by approximately 18 percent in the last four years. Since nearly all of these items must be obtained to sustain the security effort, OPS has been compelled to reduce its hiring to defray these essential support items. As a result, approximately 12 currently authorized guard positions must remain unfilled annually. To enable the OPS to fill these authorized positions, \$120,000 is required. Even if all new guard positions and additional proposed funding are approved, the Office of Protection Services will be roughly 91 guards short for staffing all currently designated posts. This number is equivalent to 55 guard posts.

Proprietary Alarm System - An additional amount of \$100,000 is requested to continue the conversion to a proprietary system. By converting from the current use of leased, externally-maintained equipment and systems, the Institution will enhance its ability to detect and handle emergency situations in the fastest possible time. With completion of this proprietary system, all alarm devices (fire and burglar) located in Smithsonian-owned facilities in the Washington, D.C. area (except the National Zoological Park) will connect directly to an alarm system control center located in the Smithsonian Institution Building. Under the current system, alarms sound in the contractor's offices and the response is often delayed. With funds requested in FY 1978, guard offices located in the various museums will be modified to permit direct electronic communication with the Control Center. This will enable each building to electronically receive instructions for guard response, speed up communication, and reduce the potential loss due to theft and fire. Thus far, some \$430,000 has been expended for the project. Additional costs are estimated to be \$400,000 and will be phased over several years.

OFFICE OF PLANT SERVICES

1976 Actual.....\$10,701,000
 T.Q. Actual.....\$ 3,261,000
 1977 Estimate.....\$13,381,000
 1978 Estimate.....\$13,523,000

(Dollars in thousands)	Base FY 1977	Increase Requested	Est. FY 1978
Number of Permanent Positions..	<u>327</u>	<u>1</u>	<u>328</u>
11 Personnel Compensation.....	5,003	102	5,105
12 Personnel Benefits.....	480	10	490
21 Travel & Trans. of Persons..	4		4
23 Rent, Comm. & Utilities.....	6,913	30	6,943
24 Printing and Reproduction...	7		7
25 Other Services.....	424		424
26 Supplies and Materials.....	500		500
31 Equipment.....	<u>50</u>		<u>50</u>
TOTAL	<u>13,381</u>	<u>142</u>	<u>13,523</u>
<u>Analysis of Increase</u>			
Necessary Pay.....		82	
Program Funds.....		60	

ABSTRACT - The Office of Plant Services (OPLANTS) operates, maintains, and repairs 10 museum and art gallery buildings and a number of other work and collection storage areas. It provides utilities, transportation, mail, and telephone services in support of research, exhibit, education, and other public programs. In addition, technical advice and assistance is made available to other Smithsonian units located away from the Washington, D.C. area.

An FY 1978 budget increase of 1 position and \$60,000 is sought for the following Buildings Management requirements: (1) Deputy Director, OPLANTS (\$30,000); and (2) Rental Space--\$30,000 for rent and related expenses. An additional amount of \$82,000 is requested for necessary pay for existing staff.

PROGRAM - OPLANTS operates, maintains, and repairs the Smithsonian's buildings on or near the Mall, including approximately 2.6 million net usable square feet in 10 museums and art galleries. Services are provided also to other work and storage areas including space in leased facilities. Operational responsibilities for utilities funding and management include large and complex airconditioning, heating, and ventilating systems and electric or electronic environmental controls and systems for the comfort of visitors and for the protection of buildings, natural history specimens, paintings, sculpture, and objects of American history and technology. Trade and craft assistance, such as carpentry, painting, and electrical work, is provided to hundreds of research projects, exhibition installations, and special public events every year. Packing, crating, warehousing, and moving services are provided for museum objects and collections.

The Office handles communications responsibilities including the management and funding of telephone installations and services (Federal Telecommunications System and local calls), the processing of outgoing mail, and the delivery of incoming mail. Transportation services including maintenance, repair, and operation of vehicles are also handled by the Office.

Other management services include providing information to bureau directors concerning status of work requests and costs, utilities consumption and costs, and supply data. The computerized power management system, installed in the History and Technology Building in early 1975, is scheduled to be extended into the Arts and Industries, Smithsonian Institution, and Natural History Buildings during FY 1977. Also in the current year, OPLANTS has established as a major objective the completion of an inventory plan, which includes identification of items, pricing, establishment of stock levels, and computerization of 10,000 stock items. The inventory plan, now 70 percent complete, is designed to provide improved and more economical supply management.

JUSTIFICATION OF \$60,000 INCREASE (Buildings Management):

Deputy Director - In the past few years, the responsibilities of the Office of Plant Services have grown to include systems analysis to ensure that the latest technology is being applied to buildings maintenance. The day-to-day service provided by OPLANTS remains critical to the operation of museums. Mechanical breakdowns could pose a safety hazard to visitors, lead to damage to specimens, and delay exhibit openings. Additionally, the Office has become involved in a number of efforts that require the application of sophisticated techniques, such as the development of an effective energy conservation program. Further, the overall managerial responsibilities of the Smithsonian Institution Service Center and the Silver Hill Facility are requiring more and more attention. To ensure that all of these important aspects receive the necessary managerial attention, an additional position for a Deputy Director (\$30,000) is requested.

Space Rental and Related Expenses - An additional \$30,000 is requested in FY 1978 to offset increased rental expenses at L'Enfant Plaza and the Smithsonian Service Center and for other miscellaneous space preparation costs. The Smithsonian is required by the terms of its leases at these locations to assume additional costs for increased operating expenses which are documented by the lessors.

Tab B

SCIENCE INFORMATION EXCHANGE

SMITHSONIAN SCIENCE INFORMATION EXCHANGE, INC.

1976 Actual.....	\$1,940,000
Transition Quarter Actual.....	\$ 521,000
1977 Estimate.....	\$1,977,000 ^{/1}
1978 Estimate.....	\$1,977,000

The Smithsonian Science Information Exchange (SSIE) was established in 1949 to serve as a national source for the exchange of information on research in progress. Since 1971, SSIE has been a nonprofit corporation, operated and controlled by the Smithsonian Institution. Its purpose is to facilitate the planning, management, and coordination of the nation's research effort through the collection, processing, and dissemination of information about ongoing research. In serving this purpose, SSIE makes every effort to maintain and operate the most comprehensive and timely data base of ongoing research information possible and to provide for the widespread dissemination of this information to scientists, research managers, and science policymakers.

SSIE Services

SSIE provides information compiled from its data base directly to users in the form of search products as well as to a number of specialized information centers. In addition, SSIE information is regularly processed under contract for publication in catalogues of research in progress in specific subject areas, such as toxicology, water resources, cancer, international energy research, and dental research. Distribution of these catalogues by the organizations which sponsor their compilation brings SSIE information to users on a significantly broader scale than would be possible through response to requests submitted directly to the Exchange by individuals.

A major example of the information services provided by SSIE under contract is the establishment and operation by the Exchange of the Current Cancer Research Project Analysis Center under the International Cancer Research Data Bank program. Funded by the National Cancer Institute for an initial period of three years, SSIE, through the Center, has undertaken to expand input in the cancer field, improve existing indexes and indexing techniques involving cancer research information, and provide a wide variety of information services to both the national and the international cancer research communities. As an integral part of this effort, SSIE's file of information on cancer research in progress is also being made available to on-line users through the computerized MEDLINE system operated by the National Library of Medicine.

The General Accounting Office (GAO), in a recent report to the Congress which analyzed Federal funding for materials research and development based on information drawn from the SSIE data base, documented the importance of SSIE's policy analysis support capabilities and identified a need for strengthening them.^{/2} The recommendations made in this report are still pending consideration. However, the Exchange has indicated its willingness to proceed with their implementation when authorized and if funds are made available.

^{/1} Includes requested pay supplemental appropriation of \$77,000.

^{/2} Comptroller General of the United States, Federal Materials Research and Development: Modernizing Institutions and Management, OSP-76-9, December 2, 1975.

Operating Within Available Resources

SSIE shares the objective of the Congress that Federal support for its operations be held to a minimum. It has worked successfully toward that objective by continuing to increase user revenues through the steady expansion of both the size of its data base and the number of its users. Moreover, SSIE user fees have been consistently increased, most recently in April, 1976, when it was determined that increases could be effected without their being counter-productive to the goal of maximizing revenues. As a result of its efforts, SSIE has been able to reduce its Federal support requirements from 81 percent of the total cost of its operation in FY 1972 to a projected 57 percent of the total cost in FY 1978 (Table I).

Federal support for the operation of SSIE is used to help defray the costs of input processing--the collection, indexing, and storage of research project information for retrieval. As indicated in Table II, the modest growth in Federal support from FY 1972 through FY 1978 has covered only 66 percent of the costs associated with the growth of input workload. From FY 1972 through FY 1975, the Exchange, through improved productivity associated with technological improvements and the doubling of user revenues, was able to accommodate workload increases, as well as absorb the effects of inflation. Beginning in FY 1976, however, total SSIE resources began to fall short of those necessary to handle continuing increases in research project registration.

SSIE's request for Federal support for FY 1978 is submitted at the FY 1977 level of \$1,977,000 (Table III). This request does not include the entire sum necessary to pay for staff members currently assigned to input processing, some of whose costs SSIE hopes to meet through further increases in the direct application of user income to input processing.

Notwithstanding projected increases in user revenues and operating improvements designed to increase further productivity, additional steps are required to relieve the operational pressures on the Exchange caused by growing workloads and rising costs. In this context, SSIE has established processing priorities through which portions of the input registration backlog can be selectively set aside. This action has the effect of excluding from the data base some of the project information submitted for registration and of reducing slightly the comprehensiveness of the data base and its value to some users. It will, however, allow the Exchange to continue to serve the majority of its users through FY 1978 without the serious disruptions in the timeliness of the data which excessive and unmanageable backlogs of input would otherwise impose.

Moreover, in FY 1978, SSIE expects to continue discussions within the Executive Branch to explore alternative means of alleviating operational pressures. These discussions are aimed at standardizing input in magnetic tape form wherever possible and encouraging increased use of SSIE's capabilities as a national information resource, with a view toward minimizing the proliferation of independent, often duplicative, ongoing research information systems. Success in this effort would promote economies in overall Federal expenditures for ongoing research information processing and dissemination and, at the same time, generate increased revenues which would help provide for the complete and timely processing of all research information received by the Exchange for registration.

Needed Improvements

Further improvements in the SSIE system are still required, as made clear in the GAO report on materials research. Greater attention needs to be paid to obtaining complete project funding information from Federal agencies, for example, and coverage of research in the non-Federal sector is severely restricted by the resources

available for solicitation of input, registration, and processing. More computer storage capacity would also be required if SSIE were to maintain an active file of two complete fiscal years of information, as recommended. These improvements must of necessity continue to be deferred because of resource limitations, in spite of the fact that collectively they would significantly enhance both the value of the data base and the rate at which new users would be attracted to the system.

Within the limits imposed by available resources, SSIE has operated effectively and efficiently. As a result, the Exchange has come to play an increasingly important role in the coordination, planning, and management of the nation's research effort. It has significantly expanded both the level and the quality of its user services and, thereby, has generated resources which have contributed increasingly to the overall cost of its operation. This FY 1978 budget request is submitted at the minimal level of Federal support considered necessary to permit SSIE to meet the nation's growing need for a national source of information on research in progress.

TABLE I - Part 1

SSIE PROCESSING WORKLOAD AND SOURCES OF REVENUE

	Actual FY 1972	Actual FY 1973	Actual FY 1974	Actual FY 1975	Actual FY 1976	Projected FY 1977	Projected FY 1978
<u>Processing Workload</u>							
Input (no. of research projects) ^{/1}	102,400	94,900	112,400	132,300	119,500	120,000	118,000
Output services (hours of effort)	20,700	19,300	18,100	34,400	50,500	51,600	57,000
<u>Sources of Revenue (\$000)</u>							
Federal Support	\$1,600.0	\$1,600.0	\$1,695.0	\$1,805.0	\$1,940.0	\$1,977.0 ^{/2}	\$1,977.0
User Revenues							
Search Products	239.4	213.9	305.9	339.0	357.1	400.1	446.0
Contract Services ^{/3}	139.8	216.3	110.4	495.0	838.7	925.4	1,054.0
Total User Revenues	\$ 379.2	430.2	416.3	834.0	1,195.8	1,325.5	1,500.0
Total Costs of Operation	\$1,979.2	\$2,030.2	\$2,111.3	\$2,639.0	\$3,135.8	\$3,302.5	\$3,477.0
<u>Distribution of Total Costs</u>							
Federal Support	81%	79%	80%	68%	62%	60%	57%
User Revenues	19%	21%	20%	32%	38%	40%	43%

^{/1} Notices of Research Projects processed, plus end of year backlog, less backlog set aside (11,331 projects in FY 1976, an estimated 16,000 projects in FY 1977 and 21,000 projects in FY 1978) as less than priority input.

^{/2} Includes anticipated supplemental appropriation request of \$77,000 to offset the impact on input operations of the October, 1976 comparability pay increase.

^{/3} Includes contract support to the National Cancer Institute under the International Cancer Research Data Bank program beginning in FY 1975.

TABLE I - Part 2

OUTPUT WORKLOAD INDICATORS

<u>Information Products</u>	<u>Number of Units by Fiscal Year</u>				
	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
<u>Product Type</u>					
Custom Searches	1,587	1,561	1,761	1,544	1,436
Custom Tabulations	113	88	73	66	78
Investigator Searches	2,510	2,646	2,290	1,157	1,432
Accession Retrievals	863	391	757	567	1,219
Custom SDI/ <u>1</u>	455	514	637	496	386
Automotive Distribution/ <u>2</u>	43,001	31,943	31,577	63,069	32,937
Historical Searches	19	58	13	10	19
Pre-run Searches	2,042	1,459	3,385	4,301	4,605
Routine SDI/ <u>1</u>	--	--	192	564	588
On-line Searches/ <u>3</u>	--	--	--	335	2,626
Estimated Total	502,800	348,600	605,300	671,000	781,600
Report Volume/ <u>4</u>					
<u>Contract Services</u>					
No. active during year	16	15	13	18	20
Average \$ Value/ <u>5</u>	\$8,600	\$14,200	\$8,500	\$27,500	\$41,900

/1 Selective Dissemination of Information.

/2 Units = number of Notices of Research Projects (NRP's) sent.

/3 Estimated number of searches of the file (hours of connect time X an estimated 4 searches per hour).

/4 Total estimated number of Notice of Research Projects (NRP's) disseminated.

/5 Calculated by dividing the number of contracts active during the year into total contract revenues for the year shown.

TABLE II

SSIE INCREASED OPERATING COSTS AND SOURCES OF REVENUE/1

<u>Factors Leading to Increases in Costs</u>	<u>FY 1972 - FY 1975 (actual)</u>		<u>SSIE Resources Applied to Meeting Increases</u>	<u>\$Value</u>
	<u>Resulting</u>	<u>Cost Increase</u>		
29% Increase in Input Workload	\$	467.9	13% Increase in Federal Support	\$ 205.0
66% Increase in User Services Workload		249.1	120% Increase in User Revenues	454.8
27% Inflation/2		540.3	Increased Productivity from technological improvements/3	597.5
TOTAL		<u>\$1,257.3</u>	TOTAL	<u>\$1,257.3</u>
36% Increase in Input Workload/4	<u>FY 1972 - FY 1978 (estimated)</u>			
175% Increase in User Services Workload	\$	571.2	24% Increase in Federal Support	\$ 377.0
42% Inflation/2		664.1	296% Increase in User Revenues	1,120.8
TOTAL		<u>934.2</u>	Increased Productivity from technological improvements/5	287.2
		<u>\$2,169.5</u>	TOTAL	<u>\$1,785.0</u>

PROJECTED FY 1978 FINANCIAL STATUS

Estimated Increased Resources FY 1972 - FY 1978	\$1,785.0
Estimated Increased Costs FY 1972 - FY 1978	<u>\$2,169.5</u>
Projected FY 1978 revenue deficit necessitating input set-aside of 21,000 research projects/6	\$ (384.5)

- /1 Based on data presented in Table I.
- /2 Calculated using GNP price indicator through 6/75. Estimated at 4.9% per year through 9/78.
- /3 Reflects implementation of machine-assisted indexing and an increase in tape input of 91% (from 36,200 projects to 69,195 projects).
- /4 Input workload in FY 1972 and FY 1975 based on input data shown in Table 1. FY 1978 input workload includes an estimated 21,000 projects which must be set aside in FY 1978.
- /5 Net decrease since FY 1975 reflects a decline in tape input and an increase in contract services of the type for which revenues are cost-dependent.
- /6 In excess of minimum acceptable working backlog of 10,000 projects (1 month).

TABLE III
SMITHSONIAN SCIENCE INFORMATION EXCHANGE
PROPOSED BUDGET FY 1978

	<u>Total Cost of Operations</u>	<u>Federal Support Requested</u>	<u>User Support</u>
PERSONNEL			
Salaries	\$2,163,000	\$1,336,700	\$ 826,300
Benefits	332,300	205,800	126,500
OPERATING EXPENSES			
Travel	22,000	8,000	14,000
Transportation of Things	3,800	2,100	1,700
Telephone	12,200	7,200	5,000
Computer	287,500	148,500	139,000
Photocopying	18,400	10,500	7,900
Building	123,200	72,000	51,200
Postage	47,600	5,100	42,500
Printing	89,000	7,900	81,100
Equipment Maintenance	12,900	7,400	5,500
Other Services	98,000	12,000	86,000
Supplies	92,100	49,500	42,600
TOTAL	\$3,302,000	\$1,872,700	\$1,429,300
SI Services	175,000	104,300	70,700
GRAND TOTAL	\$3,477,000	\$1,977,000	\$1,500,000

Tab C

MUSEUM PROGRAMS AND RELATED RESEARCH
(SPECIAL FOREIGN CURRENCY PROGRAM)

SMITHSONIAN INSTITUTION
MUSEUM PROGRAMS AND RELATED RESEARCH
(SPECIAL FOREIGN CURRENCY PROGRAM)

1976 Appropriation.....\$ 500,000	}	Equivalent in Excess Foreign Currencies
Transition Quarter Appropriation....\$ -0-		
1977 Appropriation.....\$3,481,000		
1978 Estimate.....\$4,500,000		

An appropriation of \$4,500,000 equivalent in foreign currencies which have been determined by the Treasury Department to be in excess of the normal needs of the United States is requested for FY 1978. This appropriation will be used to continue a program of grants to United States institutions for field research in the program areas listed below in those countries where excess local currencies are available. Of the total requested, \$3,500,000 will be devoted to field research, of which approximately \$2,500,000 will support ongoing projects and \$1,000,000 will be applied to new work. The remaining \$1,000,000 will allow payment of the last of four equal annual contributions in Egyptian pounds for the preservation of the monuments on the Island of Philae in Nubia.

Obligations of Funds by Program Area
(dollar equivalents)

	<u>FY 1976</u> <u>Actual</u>	<u>Trans. Qtr.</u> <u>Actual</u>	<u>FY 1977</u> <u>Estimate</u>	<u>FY 1978</u> <u>Estimate</u>
Archeology and Related Disciplines	\$ 881,000	\$ 44,000	\$2,547,000 ^{/1}	\$3,549,000 ^{/1}
Systematic and Environmental Biology	194,000	28,000	578,000	563,000
Astrophysics and Earth Sciences	43,000	185,000	151,000	270,000
Museum Programs	15,000	9,000	232,000	149,000
Grant Administration	21,000	1,000	10,000	20,000
Transfer to NSF--Science Information Program	<u>-0-</u>	<u>83,000</u>	<u>-0-</u>	<u>-0-</u>
Total	\$1,154,000	\$350,000	\$3,518,000	\$4,551,000

^{/1} FY 1977 and FY 1978 amounts include respectively the third and fourth of four annual payments, each of \$1,000,000 equivalent in excess Egyptian pounds, which together constitute the United States contribution to the project to save the Temples of Philae.

PROGRAM OF GRANTS FOR FIELD RESEARCH

The purpose of the Smithsonian Foreign Currency Program is, like that of the Institution itself, "the increase and diffusion of knowledge among men." The Smithsonian Foreign Currency Program supports this purpose by making grants to United States universities, museums, and other institutions of higher learning, including the Smithsonian itself, primarily for research and advanced professional training in fields of traditional Smithsonian competence. An appropriation of \$3,500,000 equivalent in excess foreign currencies is sought for these grants.

The Smithsonian program is the principal source of excess foreign currency support for research carried out by United States institutions in the excess currency countries. The Smithsonian program contrasts with other Special Foreign Currency Programs in that the full responsibility for the design, execution, and publication of research results rests with a scholar at a U.S. institution.

The research programs of U.S. institutions should have full access to these excess foreign currencies. The importance of this source of funds grows as inflation diminishes funds available from other sources for such research. The Smithsonian program strengthens the research and training activities of collaborating institutions abroad as well, because most projects directly involve host country institutions and scholars. Enduring professional ties which result from such joint efforts and scholarly exchange contribute to the strongest form of U.S. cultural relations with other nations. Moreover, these ties contribute both directly and indirectly to the integration of the worldwide scientific process which is vital to narrowing the gap between the industrial and the developing nations.

The Importance of Research in the Natural Sciences and Cultural History

Research in the natural sciences and cultural history is important to understanding and managing a world where human population growth exceeds the increase in resources available to support that population.

In an era of rapid environmental change, the grants awarded by the Smithsonian in systematic and environmental biology contribute to management of available resources. Smithsonian-sponsored projects in FY 1976 included a University of Michigan systematic study of the freshwater snails of Africa. The biology of these tropical snails which flourish where agricultural irrigation is practiced is important to understand because some species are carriers of schistosomiasis, a disease affecting humans and animals alike. Another project directed by Utah State University studied the ecology of the land in Tunisia bordering the Sahara Desert. This project seeks to learn the natural and agricultural processes which are causing the desert to expand, thereby reducing the amount of agricultural land. This study will help develop land use plans and modified agricultural techniques to assist in reversing the desertification process.

To understand the continuing process of the development of societies, it is necessary to identify and study the factors that have in the past and are presently causing change in various cultures. Modern archeology and anthropology seek to understand such change. Smithsonian-supported research toward this end in Fiscal Year 1976 included a Southern Methodist University study of Neolithic remains in the Egyptian desert, establishing a chronology of environmental changes and of the appearance and development of early man. Another project directed by the University of California at Berkeley sought evidence of contact between the civilizations of the Middle East and those of South Asia by studying a 4000 B.C. seaport in Pakistan.

The study of the origin of the Earth's chemical elements is intrinsic to man's understanding of his world. To further research in this area the Smithsonian awards grants in astrophysics and Earth sciences. One such grant in Fiscal Year 1976 supported the University of Chicago study of the chemical evolution of the core of stars comparable to the Earth's solar system.

In museum programs, the program provided support for Smithsonian ethnographic research in Pakistan and Egypt of folk traditions which are still practiced by American immigrants from these lands. The research was part of that underlying the joint presentation by the Smithsonian Institution and the National Park Service of performances of these traditions in Washington, D.C. as a part of the Bicentennial Festival of American Folklife and by the Smithsonian Touring Program in 52 cities around the country.

Expanding Cultural Programs

Recent developments in United States international cultural and scientific relations have opened new areas for cooperative programs appropriate for support from the Smithsonian Foreign Currency Program. The Indo-U.S. Subcommissions on Education and Culture and on Science and Technology are establishing new priorities for exchanges and research. The Museum Committee of the Indo-U.S. Subcommission on Education and Culture in particular has developed a substantial program of curatorial and exhibits exchanges. Similarly, the U.S.-Egyptian Subcommission on Education and Culture is developing proposals for mutually beneficial museum exchanges. In addition, a newly-organized American Institute of Pakistan Studies will encourage research by American scholars in a broad range of disciplines. Exchanges with each of these countries are planned by the American Association of Museums within a global program designed to foster international cooperation in the museum professional fields.

The Importance of Multi-Year Grants

The FY 1978 appropriation request would allow increased multi-year funding of major programs. Rational planning by the United States grantee institution and by the host country collaborator involves the advance commitment of professors and graduate students, as well as of facilities. The broad objectives of the participating institutions often depend on the coordination of such resources. Multi-year grants, with annual disbursements subject to a finding by the Smithsonian that satisfactory progress has been made, are essential to provide reasonable assurance of funding to these institutions.

The programs of major research consortia, like the American Institute of Indian Studies (AIIS), the American Schools of Oriental Research (ASOR), and the American Research Center in Egypt (ARCE) also benefit from such multi-year grants. Their programs embrace field expeditions as well as major national fellowship programs. Their membership, primarily composed of United States institutions of higher learning, looks to them to provide the uninterrupted research opportunities which are fundamental to the conduct of their graduate programs as well as to the maintenance of an American community of scholars knowledgeable about these critical areas of the world.

The Smithsonian Foreign Currency Program appropriation has been sufficient in the past to provide funding only on an annual basis for most of its grantees even though approved proposals are frequently of a multi-year nature. Multi-year funding, the standard practice of other Special Foreign Currency Program agencies, has been undertaken by the Smithsonian primarily when it was essential to protect investments in successful projects against the contingency that some excess currency accounts would be exhausted. This is happening in Poland and Tunisia in FY 1977.

Benefits to United States Institutions

Since the inception of the program in FY 1966, Smithsonian grants have been made to 185 United States institutions in 30 states and the District of Columbia to support more than 460 individual projects. Publications known to have resulted from program grants totaled more than 900 at the end of FY 1976.

More than 100 research collections have been returned to United States universities and museums. A similar number of collections has been added to the research resources of the excess currency countries. These collections are the original biological specimens and the archeological and ethnographic materials acquired in the course of field research. They will remain available for further study and interpretation by other generations of scholars long after the research teams supported by the Smithsonian have dispersed and their conclusions have been published.

The benefits of the program have been felt by a far larger number of institutions than the 185 mentioned above which were direct grant recipients. For example, three of the grantee institutions are consortia of United States scholarly institutions. They are the AIIS in Chicago, Illinois, with 29 institutional members; the ARCE in Princeton, New Jersey, with 29 institutional and some 500 individual members; and the ASOR in Cambridge, Massachusetts, with 135 member institutions, including three scholarly associations.

Smithsonian grants have supported the research in India of 140 AIIS fellows over the nine year period from FY 1968 through FY 1976. The fellows were drawn from some 43 United States institutions in 22 states. Program grants have also supported 37 ARCE projects over the eleven year period from FY 1966 through FY 1976. Nine ASOR excavations in Israel and Tunisia over nine years have provided research opportunities for more than 260 senior U.S. scholars and field training for more than 324 graduate students.

Scientific Review Under the Smithsonian Program

The Smithsonian's Special Foreign Currency Program provides a mechanism for American private sector institutions, such as universities, to make use of excess foreign currencies for the support of their own research programs.

The Smithsonian program considers proposals from any qualified American institution for research in fields of traditional Smithsonian competence. The program seeks the advice of experts in the specific area of science to be studied and convenes annual advisory councils of senior scholars in the relevant program areas. The councils discuss and evaluate the proposals, taking into consideration the experts' opinions, and provide specific advice to the Smithsonian regarding the selection of projects for support and the priority among proposals recommended for support.

Foreign currency awards are executed as normal Federal contracts, with the American grantee institutions providing for full fiscal accountability. The Smithsonian audits each grantee's periodic financial reports and, where grantees maintain records abroad, conducts site audits to ensure that appropriate accounting procedures are followed.

Projects lasting more than one year are subject to annual review of scientific progress by the advisory councils before another year of funding is approved. In addition, Smithsonian staff scientists and program advisory council members visit projects in the field when firsthand scientific reports are considered necessary. Smithsonian policy requires that grantees publish scientific results and that scientific collections be readily accessible to the scholarly community.

FOURTH U.S. CONTRIBUTION TO THE SALVAGE OF THE TEMPLES OF PHILAE

The Smithsonian is seeking funding for the last of four annual contributions, each of \$1,000,000 equivalent in Egyptian pounds, to help preserve the temples on the Island of Philae which have been inundated by Nile River waters regulated by the Aswan Dam. The total \$4,000,000 represents the final United States contribution to the International Campaign to Save the Monuments of Nubia of which the Philae Program is a part. This campaign was initiated in 1960 by UNESCO at the request of Egypt and the Sudan.

In 1960, the United States Congress in Public Law 86-472 asked the President to recommend a United States contribution to the UNESCO fund raising campaign. President Kennedy responded on April 6, 1961, that he considered it "to be in the interest of the United States to assist in rescuing these historic remains of a former civilization from destruction...."

The Smithsonian proposes to make this final payment available to the government of Egypt as in FY 1977, through a grant to the American Research Center in Egypt, a consortium of United States institutions of higher learning, incorporated in Massachusetts.

The total cost of the program to salvage the monuments on the Island of Philae will exceed \$16,000,000 in convertible and local currencies. As of September 30, 1976, some \$10,547,000 has been received or pledged, of which approximately \$7,509,000 has actually been received. Egypt has undertaken to meet one-third of the project's total cost.

The salvage plan, adopted with the advice and concurrence of an American engineer, provides for a coffer dam to be erected around the Island of Philae to permit the lowering of the water for the removal of the temples. They are to be re-erected on the nearby Island of Agilkia, in a setting like the original one, where they will be higher and safe from further erosion by the river and accessible to all. In the course of developing these plans, the government of Egypt sought the advice of the United States at each stage.

Philae salvage work was continuing satisfactorily in September, 1976 when the Archeologists and Landscape Architects Committee met at Aswan. Removal of the temples, begun in September, 1975, was underway with some 30,000 blocks of stone lifted from the Island to a compound on the east bank of the Nile. Leveling of Agilkia Island, where the monuments are to be re-erected, has been completed and foundations for the Temples are being laid.

Archeological studies, begun two years ago when the island was first freed of water, have discovered missing blocks which had fallen from the monuments into the silt adjacent to the island. As many as possible will be recovered and employed in the restoration of the Temples.

SPECIAL FOREIGN CURRENCY PROGRAM APPROPRIATIONS AND THE U.S. TAXPAYER

An appropriation for this program does not add to the tax burden of Americans because the money used for foreign currency grants comes from U.S. holdings of foreign currencies abroad in existing accounts that were established in connection with the "Food for Peace" (P.L. 480) program. These accounts were generated largely through sales of surplus U.S. agricultural commodities abroad in exchange for local currencies. In cases where these are greatly in excess of the projected normal U.S. needs, the Treasury Department designates them "excess foreign currencies." They then become available through the Special Foreign Currency Program appropriation process for U.S. uses like scientific research.

Erosion of these accounts by inflation is in many cases dramatically reducing their value to the United States. Indian and Pakistani rupees have, for example, lost almost half their value since 1970. As a consequence, when a worthy use of these excess currencies can be identified through programs like the Smithsonian Foreign Currency Program, the U.S. can effectively employ at least some of these currencies before inflation effectively eliminates their usefulness.

OBLIGATIONS OF TOTAL PROGRAM FUNDS BY COUNTRY
(dollar equivalents)

	<u>FY 1976 Actual</u>	<u>Trans. Qtr. Actual</u>	<u>FY 1977 Estimate</u>	<u>FY 1978 Estimate</u>
Egypt	\$ 427,000	\$ 7,000	\$1,707,000/ ¹	\$2,523,000/ ¹
India	350,000	137,000/ ²	586,000	1,527,000
Pakistan	65,000	15,000	409,000	501,000
Poland	43,000	191,000	232,000	-0-
Tunisia	<u>269,000</u>	<u>-0-</u>	<u>584,000</u>	<u>-0-</u>
	\$1,154,000	\$350,000	\$3,518,000	\$4,551,000

¹ Includes payments of \$1,000,000 equivalent excess Egyptian pounds for the salvage of the Temples of Philae.

² Includes \$83,000 equivalent transferred to the NSF Science Information Program.

STATUS OF SMITHSONIAN SFCP FUNDS
(dollar equivalents)

	<u>FY 1976 Actual</u>	<u>Trans. Qtr. Actual</u>	<u>FY 1977 Estimate</u>	<u>FY 1978 Estimate</u>
Unobligated Balance, Start of year	\$ 334,000	\$364,000	\$ 28,000	\$ 91,000
Appropriation	500,000	-0-	3,481,000	4,500,000
Recovery of Prior Years' Obligations	684,000	14,000	100,000	75,000
Unobligated Balance, End of year	<u>-364,000</u>	<u>-28,000</u>	<u>-91,000</u>	<u>-115,000</u>
Total Obligations	\$1,154,000	\$350,000	\$3,518,000	\$4,551,000

Tab D

FACILITIES PLANNING, RENOVATION, RESTORATION,
AND CONSTRUCTION

FACILITIES PLANNING, RENOVATION, RESTORATION, AND CONSTRUCTION

Summary

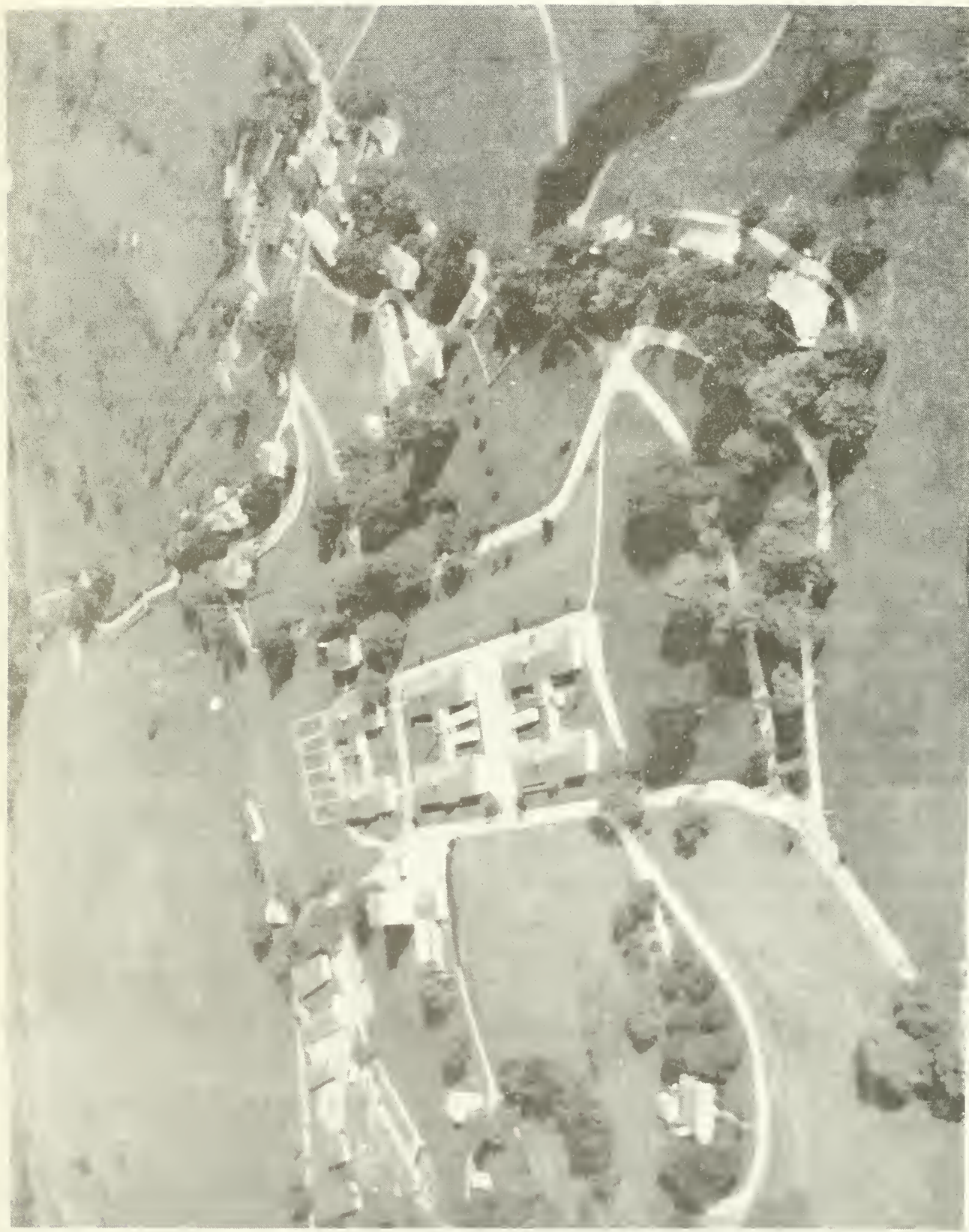
<u>Account</u>	<u>FY 1976 Appropriation</u>	<u>Trans. Qtr. Appropriation</u>	<u>FY 1977 Appropriation</u>	<u>FY 1978 Estimate</u>
Construction and Improvements, National Zoological Park	\$8,390,000	\$1,440,000	\$6,580,000	\$1,000,000
Restoration and Renovation of Buildings	1,192,000	400,000	2,950,000	9,700,000
Construction: National Air and Space Museum (liquidation of contract authority)	2,500,000	--	--	--
Museum Support Center Planning	--	--	--	325,000
Totals	\$12,082,000	\$1,840,000	\$9,530,000	\$11,025,000

The FY 1978 appropriation requested for Construction and Improvements, National Zoological Park will be used for essential renovation, repair, and improvement projects at Rock Creek Park and at the Front Royal, Virginia Conservation and Research Center.

The FY 1978 appropriation sought for Restoration and Renovation of Buildings emphasizes the addition of a study center and library to the History and Technology Building; construction of a dormitory adjacent to the Multiple Mirror Telescope at Mt. Hopkins; continued funding for phased projects including renovation of the Arts and Industries Building, repairs to the Renwick Gallery exterior and the History and Technology Building terrace, installation of building equipment monitoring systems, improvements for handicapped persons, correction of hazardous conditions, and installation of fire detection and control systems; modifications for employee safety and health at Silver Hill; and general repairs and improvements for building preservation and safety purposes.

Funds requested in the FY 1978 Construction appropriation will enable architectural and engineering planning to begin for the construction of a Museum Support Center.

Justifications for these programs and projects appear in the following sections.



FRONT ROYAL CONSERVATION & RESEARCH CENTER--RESEARCH & ANIMAL HOLDING FACILITIES

CONSTRUCTION AND IMPROVEMENTS,
NATIONAL ZOOLOGICAL PARK

1976 Appropriation.....	\$8,390,000
Transition Quarter Appropriation.....	\$1,440,000
1977 Appropriation.....	\$6,580,000
1978 Estimate.....	\$1,000,000

This appropriation is used to fund repairs, alterations, and improvements to existing facilities including exhibits; to prepare plans and specifications for construction; and to perform renovations, restorations, and new construction implementing the Master Plan approved by the Commission of Fine Arts and the National Capital Planning Commission in FY 1973.

The requested FY 1978 appropriation will be applied as follows:

Renovation and Repair of Buildings	
National Zoological Park--Rock Creek	\$300,000
Front Royal Conservation and Research Center	<u>700,000</u>
Total	\$1,000,000

Status of Construction Program

The National Zoological Park (NZP) was established in 1890 under the Board of Regents of the Smithsonian Institution, who were authorized to "administer and improve" the Zoo for "the advancement of science and the instruction and recreation of the people" (20 U.S.C. 81). The Zoo has two locations. Exhibition and education functions have been centered since 1890 on some 150 acres in Washington, D.C.'s Rock Creek Valley. Complementary animal conservation and breeding functions (to be done in collaboration with other zoos) are now being developed on about 3,000 acres of land near Front Royal, Virginia. The National Zoo's Rock Creek facilities, which have been undergoing major renovation since 1974 in accordance with the Master Plan, are nearing the half-way mark in conversion from archaic facilities into modern and healthful housing for the valuable animals with educational and enjoyable surroundings for visitors. Pandas, elephants, giraffes, hippopotamuses, rhinoceroses, monkeys, birds, and lions and tigers have been served thus far. At the present time, construction of the new bear exhibits, a series of exhibits for seals, sea lions, beavers, and otters in Beaver Valley, an education center, and the first phase of a general service and parking facility is being completed with funds appropriated in previous years.

Over \$26,000,000 has been appropriated for the Master Plan to date. Of the 41 major projects in the original \$113,000,000 Master Plan, three have been scaled down considerably and ten have been deleted for being too costly, impractical (for example, for being in the flood plain), or for being unnecessary due to lower cost alternatives for animal housing and conservation at Front Royal. Thus, the revised cost of the Master Plan is now estimated at some \$71,000,000. Approximately \$45,000,000 will be required for its total completion in future years. An additional \$10,000,000 will also be required for the period of 1978-1984 for renovations at Rock Creek and for repairs, improvements, and limited development of the Front Royal Conservation Center.

No new major improvement funds are being sought in FY 1978. This temporary hiatus in new construction will allow full attention to be directed toward completing major projects previously funded. It will also allow a budget emphasis on meeting operation requirements for facilities already constructed or underway now. (See pages A-24-A-26.) Furthermore, this pause will enable further evaluation of future Master Plan construction, especially in relation to Front Royal development. A chart detailing funds appropriated for Master Plan development, Rock Creek renovations, and Front Royal development through FY 1977 and anticipated budgets through FY 1984 is shown on page D-5.

Renovation and Repair of Buildings (\$1,000,000). The \$1,000,000 sought for FY 1978 will be used for essential renovation and construction projects. Of this amount, \$300,000 is requested to renovate the central gas fired heating plant at the National Zoological Park. The existing heating plant has been flooded several times in the last few years due to flash flooding in Rock Creek Valley. It is now imperative that boilers be moved and raised to a higher elevation to avoid any possibility of heat shutdown which could result in the loss of valuable animals. A nearby building will be renovated, new boilers installed, and flood protection provided for the building. A new fuel oil storage tank will be installed as a standby for one boiler in event of shortages in natural gas.

An amount of \$700,000 is requested for the National Zoological Park Conservation and Research Center at Front Royal, Virginia. The appropriation is required to rebuild and rehabilitate utility systems to overcome years of deterioration and to update water treatment and sewage disposal systems to comply with regulations imposed by the State of Virginia and the Environmental Protection Agency under the Water Pollution Control Act (P.L. 92-500) and the Safe Drinking Water Act (P.L. 93-523). Other priority rehabilitation work includes repair of animal barns and enclosures, construction of a new hoofed stock barn, renovation of a building for use as a veterinary clinic, resurfacing of roads, and removal of all deteriorated and unsafe structures. This work will substantially complete the upgrading of most existing facilities selected for retention and prepare the way for future construction of animal handling facilities and a modestly scaled visitors center for conservation education.

Construction and improvement work is accomplished primarily by contract except in instances when suitable contractors cannot be located or their estimates are exorbitant in relationship to the proposed job. In such cases, accomplishment of the work by other means, such as the purchase with this appropriation of supplies, materials, and equipment, and the use of staff or temporary labor, is the most cost effective solution. Furthermore, it is occasionally necessary to fund from this account other expenses directly associated with the displacement of animals and materials as a result of the construction program.

Estimates include cost escalation
to October 1978.

NATIONAL ZOOLOGICAL PARK
Construction Program
1974-1984

January 1977

Activity	Fiscal Years												TOTAL
	1974	1975	1976	TQ	1977	1978	1979	1980	1981	1982	1983	1984	
I. Master Plan													
Lion-Tiger Facility	3,000 ^{/1}												3,000
Elephant/Bird Houses	160	2,970											3,130
Education-Administration Building		2,500											2,500
General Services and Parking Facility	300	2,700	4,000 ^{/2}							13,500			20,500
Lower Rock Creek Valley	100	400	2,500										3,000
Beaver Valley Area		80	490 ^{/2}										6,410
Central Area		100		900 ^{/2}	5,840		5,400	3,000					9,400
Waterfowl Pond and Small Cats		20					500	950	12,000				520
Aquatic Habitats							50						13,000
Health & Research Hill (Incl. Holt House Renovations)								1,000		2,000			3,000
Master Graphics			100		100								200
Restaurants & Entrance-way										500	6,000 ^{/5}		6,500
Subtotals	3,560	8,770	7,090	900	5,940		5,950	4,950	12,000	16,000	6,000		71,160
III. Rock Creek Renovations													
	230	650	600	160	440	300	400	400	400	400	400		4,780
I. Front Royal Conservation Center													
Necessary Repairs and Improvements		^{/3}	700	380	200	700	800	800	800	800	600		6,380
Visitor Services							100 ^{/4}	1,400 ^{/4}	1,000 ^{/4}				2,500
GRAND TOTALS	3,790	9,420	8,390	1,440	6,580	1,000	7,250	7,550	14,200	17,200	7,000	1,000	84,820

^{/1} Excludes \$275,000 for planning appropriated in FY 1973.

^{/2} An additional \$800,000 has been reprogrammed with Congressional approval to the General Services Facility from Beaver Valley FY 1976 appropriation (\$350,000) and from the Central Area TQ appropriation (\$450,000).

^{/3} Amount of \$125,000 appropriated in FY 1975 under Restoration and Renovation of Buildings account.

^{/4} Estimates do not include visitor transportation systems.

^{/5} Does not reflect potential private contribution.

RESTORATION AND RENOVATION OF BUILDINGS

1976 Appropriation.....	\$1,192,000
Transition Quarter Appropriation.....	\$ 400,000
1977 Appropriation.....	\$2,950,000
1978 Estimate.....	\$9,700,000

This account is used to fund major repairs, alterations, and improvements of a long-term nature and benefit. From time to time, it is used also for construction of major additions to existing facilities or for minor new temporary or permanent buildings or other facilities. Facilities planning and studies and other related expenses may be funded from this account. Projects undertaken are in support of research, care, and protection of collections; public accommodation and safety; and maintenance and development of a valuable physical plant and natural areas. Work is accomplished primarily by contract except in instances when suitable contractors cannot be located or their estimates are exorbitant in relationship to the proposed job. In such cases, accomplishment of the work by other means, such as the purchase with this appropriation of supplies, materials, and equipment and the use of staff or temporary labor, is the most cost effective solution.

With funds now available, the Institution is carrying out several significant projects, the most notable of which is the continuing phased renovation of the Arts and Industries Building. Funding for this and other phased projects such as improvements for the handicapped and installation of fire protection systems, as well as funding for construction of a study center and library addition to the History and Technology Building and other improvements, repairs, and major maintenance work, is sought in the FY 1978 appropriation.

An amount of \$9,700,000 is requested in FY 1978 for the following projects:

1. Study Center and Library addition to the History and Technology Museum Building	\$7,100,000
2. General repairs and improvements	815,000
3. Arts and Industries Building renovation	300,000
4. History and Technology Building terrace repairs	250,000
5. Building equipment monitoring systems	250,000
6. Handicapped access and correction of hazardous conditions	295,000
7. Renwick Gallery exterior repairs	100,000
8. Fire detection and control systems	175,000
9. Silver Hill Facility improvements	175,000
10. Mt. Hopkins Observatory dormitory	<u>240,000</u>
Total	\$9,700,000

Details of these projects appear in the following justifications.

1. Study Center and Library Addition (\$7,100,000).

An amount of \$7,100,000 is requested to build a sixth floor addition to the National Museum of History and Technology Building. This is required to provide necessary additional space for the Museum's library and for the collection of archival material and graphic Americana.

The new facility will accommodate the Museum's present library, now widely scattered within the Museum and in inaccessible storage space. It will provide special study and conference facilities for visiting scholars, students, staff, and the public. It is required to permit this Museum to fulfill its most fundamental mission--making its collections accessible for use in the service of history.

The building which houses the National Museum of History and Technology was completed at a cost of \$34,000,000 and opened to the public in 1964. The building has five floors and a basement totaling 684,000 square feet. The first three floors and a portion of the basement are devoted to exhibits. The fourth and fifth floors contain space for reference collections, staff offices, and the present library. In the basement are located additional reference collection storage areas, receiving and shipping facilities, shops, and laboratories. It also contains the Photographic Services and the Conservation-Analytical Laboratories, both of which serve the entire Smithsonian Institution, and a public cafeteria.

The National Museum of History and Technology differs from any other museum or institution in the world. It is the national museum of American history, excelling both in the diversity of its collections and subject interests as well as the professional leadership of its staff. Its basic resources are its collections of some 16 million objects and its staff of 51 curators and historians and 59 technicians and specialists plus exhibits, administrative, and other support personnel.

The Museum's collections of artifacts of history are unparalleled. Approximately half are related to the history of science, industry, and technology--a mainstream of American history. The London Times once noted that, "The Museum of History and Technology of the Smithsonian Institution in Washington now contains the largest concentration of young and able specialist historians of science in the western world...." The collections of objects and the staff of curator-historians are supplemented with essential holdings of library and archival materials, such as 225,000 items in the collection of early illustrated trade catalogues and an estimated 1.5 million pieces in the Collection of Business Americana.

The success of the National Museum of History and Technology as a public museum, as a resource for aid to other museums, and as a growing influence in historical interpretation, rests in large measure upon its library and archival collections. These are used by the curators, by their professional colleagues from other museums and universities, and by students and writers. They are used to respond to public inquiries, to authenticate exhibits, to document objects, to design classroom learning aids, to develop museum education programs, and to promote communication and creative discussion among museum professionals and other scholars.

It is essential to preserve these collections in accessible order and to provide study facilities for the researchers who use them. Additional space is required to accommodate the archival material and reduce the waste of time and effort in consulting it in storage space which is virtually inaccessible.

When the Museum was conceived in 1957, it was planned to be nearly one-third larger than the building finally constructed. To reduce costs, the space originally designed for most uses including the library was reduced in proportion. Space planned for the use of students and visiting scholars was mostly eliminated. Since then, priority needs for expanded conservation facilities and for growing collections of objects have prevented the proper enlargement of library and study space required to accommodate very significant archival and library acquisitions, or spaces to perform research on them. The Museum has been able to preserve some fine acquisitions only by housing them temporarily and inadequately in space, such as closed exhibition halls, planned and required for other uses. Such has been the case with the temporary housing of the Dibner Library. This large gift collection of rare books, incunabula, and manuscripts relating to the history of science and technology, letters and portraits of scientists,

and scientific medals and instruments previously formed the major holding of the Burndy Library in Norwalk, Connecticut. The nucleus of this collection consists of the original books and pamphlets which proclaimed new truths or hypotheses, redirected scientific thought, brought understanding of natural laws, and at times introduced technological change.

Funding already appropriated to the Institution totaling \$275,000 will allow the completion in FY 1977 of plans and specifications for this study center and library addition.

2. General Repairs and Improvements (\$815,000).

The Smithsonian (exclusive of the National Zoological Park separately presented) has 10 major museum buildings (ranging in age from new to well over 100 years old) containing some 2.6 million net usable square feet and having a replacement value of several hundred million dollars. It also includes in its space inventory (not including rental properties) many lesser structures containing about 0.5 million square feet used for research, collections management, and administrative purposes. Several thousand acres of land are dedicated to research, conservation, and education. Heavy public use of these facilities, general deterioration because of age and weathering, visitor and staff safety requirements, and the need to make improvements to keep pace with program changes create a demand for regular, annual attention beyond the capability of the Institution's maintenance staffs.

Specific, generally major, projects are budgeted in this appropriation under individual building or other headings. There is an urgent need, however, for substantial annual funding for planning, engineering, repair, and improvement response to other projects including those that arise unexpectedly. An appropriation of \$815,000 (about \$0.26 a square foot not including grounds areas) is requested for FY 1978.

These funds will be used for such needs as: repairs to roofs and exteriors of buildings to provide weather-tight interiors and conserve heating and airconditioning; modifications and repairs to mechanical and electrical systems to ensure safe and efficient performance; additions, repairs, and improvements to plumbing, sewers, and airconditioning systems, fences, elevators, and escalators; structural work to permit the retention of essential piers and docks used for research vessels; installation of lightning protection; design and architectural/engineering studies; alterations and improvements to structures for program needs; and the like.

3. Arts and Industries Building Renovation (\$300,000).

Approximately \$5,500,000 has been appropriated for the renovation and restoration of the historic 1879 Arts and Industries Building. Major improvements already completed include installing heating, ventilating, and airconditioning systems; replacing obsolete, inadequate, and potentially hazardous electrical and utilities systems; installing additional restrooms; recreating the original appearance of the rotunda and four major exhibition halls; providing new entrances to the building for public safety and accessibility; and other renovations.

About \$2,500,000 of additional work remains to be done to complete the renovation and to protect work already accomplished. Much of this work involves the exterior of the building and is necessary to ensure water-tightness and insulation to save on utility consumption. Projects of a particularly pressing nature include window glazing and sash repair or replacement, masonry painting, granite resurfacing, and replacement of downspouts and drains. The FY 1977 budget provided \$950,000 primarily to repair and replace the roof which has deteriorated badly. Temporary repairs have been made for the Bicentennial period, but a complete, permanent job is needed to give long-term protection to the building and its contents. An additional \$300,000 is sought in FY 1978 to continue with the roof replacement and other necessary renovation.

4. History and Technology Building Terrace Repairs (\$250,000).

An amount of \$250,000 is required to continue a phased program (estimated to cost \$800,000) of repairing the terrace of the History and Technology Building, which serves both as a pedestrian walkway around the building and as the roof to interior basement work, machinery, and storage space. Apparent original construction deficiencies have led to general deterioration of the waterproofing under the paving material and consequent extensive leakage into work and collection areas. An amount of \$100,000 was appropriated for this purpose in FY 1977.

5. Building Equipment Monitoring Systems (\$250,000).

Smithsonian buildings contain a vast array of pumps, chillers, condensers, fans, airconditioning, dehumidifying, and other complex and costly mechanical equipment. Monitoring of this equipment for safe, efficient, and economical (increasingly important as utility costs steadily rise) operation is done currently on a tour basis involving personal inspection by journeyman-level mechanics. About 47 staff-years of effort (at about \$12,000 a staff-year) are expended with results that vary depending on the care taken in observation and recording of results. Available personnel are almost totally consumed with inspections and emergency repairs. Although preventive maintenance schedules have been prepared in detail on much of this equipment, very little such work can now be performed. Equipment failures with potentially serious consequences for building and collection safety are becoming more frequent.

Industry systems now exist that can be installed in the Institution to monitor operating equipment by sensors and report results electronically to central control panels. The installation of such systems would reduce by 60 percent the number of watch engineers. This savings of some 29 staff-years and about \$350,000 annually could be reapplied to preventive maintenance work. Such a system is estimated to cost \$450,000 for buildings on the Mall, the Renwick Gallery, and the Fine Arts and Portrait Galleries Building. This estimate is based on a detailed study of all physical plant equipment requiring sensors and incorporates the planned use of existing personnel to accomplish a portion of the installation. Funding of \$200,000 was provided in the FY 1977 budget for the first phase of this installation. Additional funding of \$250,000 is sought in FY 1978 to complete this project.

6. Handicapped Access and Correction of Hazardous Conditions (\$295,000).

Many of the Smithsonian Institution buildings and facilities in the Washington Metropolitan area were designed and constructed before the development of contemporary standards for handicapped access and public safety. As a result, the buildings require modifications to eliminate or mitigate existing architectural barriers and hazardous conditions. The modifications required would include such things as providing adequate building access, installing elevators, lifts or ramps, renovating restroom facilities, providing access to and wheelchair spaces within auditoriums, eliminating slippery walking surfaces, correcting fall hazards from parapet walls or pedestals, installing guard railings, and providing adequate exit capacity. Funding of \$175,000 was appropriated for these needs in FY 1977. An additional appropriation of \$295,000 is requested in FY 1978.

7. Renwick Gallery Exterior Repairs (\$100,000).

An engineering survey determined that the restored Renwick Gallery facade has been severely damaged by water entry through unprotected surfaces, mortar joints, deteriorated building sealants, and cracks caused by temperature changes. Extensive repairs are required for appearance purposes, to guard against the hazards of falling stonework, and to protect the interior of the building. The total repair job is estimated at \$450,000 of which \$200,000 was provided in the FY 1977 budget to accomplish the most urgent work. A further \$100,000 is requested for FY 1978 to continue this project.

8. Fire Detection and Control Systems (\$175,000).

Fire protection surveys have been conducted in all major facilities identifying specific needs for fire detection and control systems. Such systems are presently lacking in many public areas and should be installed for the protection of visitors and exhibits. Similar safeguards are needed in areas where museum collections are housed and where research by staff and visiting students and scholars takes place. Other fire protection needs include the addition of booster pumps to give adequate water pressure and the installation of fire doors. An amount of \$250,000 was provided in FY 1977 for these needs. Additional funding of \$175,000 is sought in FY 1978 to continue a phased program.

9. Silver Hill Facility Improvements (\$175,000).

The Silver Hill facility is primarily a storage and object restoration facility. Three hangar-type buildings containing historically significant aircraft and providing a view of ongoing restoration activity have just been opened to the public. The total facility consists of 24 steel frame buildings on 21 acres of land and contains approximately 290,000 square feet of storage area. The development of this facility over the years has been on an as-needed basis with many buildings changing use and/or function several times. As a result, many buildings have inadequate environmental, safety, fire protection, electrical, and sanitary systems. To provide a safe and healthful environment for employees at this facility, dust collection and venting should be provided in the shops, paint spray booth modifications are required, electrical service modifications are necessary, and the locker and restrooms need to be brought up to acceptable health standards. An appropriation of \$175,000 is requested for this work.

10. Mt. Hopkins Observatory Day-sleeper Dormitory (\$240,000).

For several years, the Smithsonian Astrophysical Observatory has been following a phased plan of physical site improvements to its Mt. Hopkins, Arizona, Observatory. This includes work to provide adequate and safe facilities for staff and visitors. An appropriation of \$240,000 is required in FY 1978 to continue this program. This amount would be used to add a dormitory complex to serve staff and visiting scientists and technicians who will be observing at night with the Multiple Mirror Telescope (MMT) now under construction at the summit of Mt. Hopkins (elevation 8,585 feet) and scheduled to become partially operational by December, 1977.

The proposed facility will meet the following essential criteria. It will have sufficient capacity to accommodate 8 people in single rooms under normal conditions, and up to 16 with double occupancy in case of an emergency or in periods of exceptionally intensive observing; be readily accessible and in proximity to the MMT to minimize time consuming travel over mountain roads at the end of a night's work; and provide a controlled day-time sleeping environment for personnel participating in long hours of night observation work, so that their observing visits, which normally range from 3 to 15 days, can be most productive.

An existing barrack-type, prefabricated, metal structure erected in 1971 to provide dormitory facilities for users of observing instruments located along the 7,600 foot ridge, fails to meet any of these needs. Because of its metal construction, it cannot be adequately sound-proofed; and its capacity is insufficient (8 small bedrooms which often are fully occupied by users of facilities now operational). Moreover, the alternative use of commercial motels is impractical because of distance, time, and safety considerations involved in traveling over mountain roads. Hence, construction of a new day-sleeper dormitory is considered the only feasible solution to permit the efficient use of the new MMT.

CONSTRUCTION: MUSEUM SUPPORT CENTER PLANNING

1976 Appropriation.....	\$ 0/1
Transition Quarter Appropriation.....	\$ 0
1977 Appropriation.....	\$ 0
1978 Estimate.....	\$325,000

On September 19, 1975, the President signed into law P.L. 94-98 authorizing the Regents of the Smithsonian Institution to prepare plans for museum support facilities. These facilities are intended to restore a significant amount of Mall building space to public use; to provide adequately for the long-range care and use of the Institution's collections; to provide associated research and study space; and to incorporate areas for conservation of the collections, related training, and the dissemination of conservation information.

The Smithsonian's museum activities in the Washington area are concentrated around and near the Mall, an area dedicated to the use, education, and enjoyment of the public. These activities, which encompass exhibits, education, collections, conservation, research, and support, fully occupy and crowd available Mall space. Economies in the use of space are being pursued which entail the leasing of inexpensive, nearby space for office and workshop purposes and the examination and disposal of materials in various buildings to free up presently-held space. Nevertheless, the continuation and expansion of direct public services and the necessary growth of collections require additional space in which to house the less visible services of collections management, conservation, documentation, research, and publication.

During the past eighteen months members of the Smithsonian staff and a consortium of consultants have carefully analyzed existing facilities and space requirements of the Institution, concentrating initially on the critical needs of the National Museum of Natural History. This assessment indicates that a project costing \$21,500,000 with approximately 338,000 square feet of office, storage, and laboratory space will meet the Institution's most pressing space needs as currently projected through the middle of the next decade. An amount of \$325,000 is requested in the FY 1978 budget to initiate architectural and engineering planning for a Museum Support Center. The balance of the planning funds, estimated at \$575,000 and construction and equipping funds estimated at \$20,600,000 will be sought by fiscal year 1980. It is anticipated that legislation authorizing construction will be introduced early in the 95th Congress.

The Reason for Collections and Their Growth

Collections of original objects in the fields of science, history, and art are required for use in the identification of similar or related objects, research, education, and exhibitions or simply for aesthetic enjoyment and patriotic inspiration. Their importance spans such activities as the application of collection-based entomological research for the control of insects, the study of human disease in ancient anthropological materials, the historical understanding of technological and engineering developments, and the pleasure a viewer experiences in the presence of a master work of art. In these contexts nothing can take the place of the original object or specimen.

Museums and museum collections must and should grow. Day-to-day history, the practice of the arts, and new technologies are relentless generators of objects to be preserved, exhibited, studied, and interpreted. Archeologists discover, collect,

/1 An amount of \$2,500,000 was appropriated in the construction account for the liquidation of the National Air and Space Museum contract authority.

and preserve the evidence of new knowledge of the past. Ethnologists collect at an accelerating pace in order to preserve the material record of rapidly changing cultures. In science there is an intensifying need to collect, study and describe the flora, fauna, rocks, and minerals of the earth in order to add to our understanding of the interlocking dependencies for survival. Collections are invaluable baseline records against which to measure and evaluate change.

The Smithsonian has had 130 years of concern for collections, their need, and their use. It has consistently resisted the acquisition of collections it has considered unjustified or inappropriate. At the same time, the Institution has accepted its responsibilities to develop and preserve for use collections required for research and for the scientific, cultural, and technological record.

Components of the Museum Support Center

Collections storage is the fundamental purpose of the support center and reflects a high priority need to reclaim Mall exhibits space, attics, hallways, basements, and work spaces now encumbered with poorly and hazardously housed and often inaccessible specimens and objects. The proposed Museum Support Center building will provide a major amount of new storage space for the proper housing and care of collections. Included will be 187,000 square feet for the National Museum of Natural History, 28,000 for the National Museum of History and Technology, and 24,000 for other museums and galleries for a total of 239,000 square feet. This storage space will be provided by a utilitarian, single story, double-decked structure.

The National Museum of Natural History tentatively has designated the following percentages of its departmental collections for transfer to the Center: anthropology 95, botany 25, entomology 60, invertebrate zoology 20, mineral sciences 50, paleobiology 20, and vertebrate zoology 20 percent. Relocation of these collections will clear approximately 40,000 square feet of prime exhibits space, thus adding approximately 19 percent to the Museum's capability to present exhibits to its growing number of visitors, now over 4.5 million a year. Other benefits include the freeing of space on the Mall for education and research activities and better care of all collections.

Second only to collection housing requirements is the need to provide a strong research and study program. This will be achieved by including in the proposed building approximately 31,000 square feet of offices and 38,000 square feet of laboratories for the professional and technical staff that will be associated directly with the collections. This space also will accommodate the Smithsonian Oceanographic Sorting Center which would be moved from its present expensive rental quarters to achieve a more efficient relationship to program elements of the Museum of Natural History.

A final principal component of this project proposal is an approximate 31,000 square feet facility for conservation. Included in this first space increment for conservation will be a collections' receiving and fumigation unit, a conservation information referral center, space for the treatment of objects and research on conservation techniques, and a major facility for training staff and visiting interns in scientific theory and practical conservation skills. The provisions for necessary increased activity in conservation research and training, by bringing together Anthropology's processing and conservation laboratories with those of the Oceanographic Sorting Center and the Conservation-Analytical Laboratory, will open new opportunities for Smithsonian conservators and trainees.

Site Acquisition

A site suitable for construction of support center facilities in which to house these services is being assembled adjacent to the Institution's current preservation

and restoration facility at Silver Hill, Maryland, which is devoted substantially to the collections of the National Air and Space Museum. Sixty-one acres have been transferred to the Smithsonian in recent months by the General Services Administration, and negotiations are underway with respect to another 21 acre tract which would complete the assembly.

Future Plans

Studies on collections and their utilization will continue to ensure effective collections policies and management and to provide the best analyses of growth projections and future space requirements.

Tab E

APPENDIX

SMITHSONIAN INSTITUTION
"Salaries and Expenses"

Report of Appropriation by Objects of Expense
(In thousands of dollars)

	<u>1976</u> <u>Actual</u>	<u>T.Q.</u> <u>Actual</u>	<u>1977</u> <u>Estimate</u>	<u>1978</u> <u>Estimate</u>	<u>Increase</u> <u>1978 over 1977</u>
11 Personnel Compensation.....	48,108	13,000	56,115	58,120	2,005
12 Personnel Benefits.....	4,600	1,236	5,449	5,642	193
21 Travel & Transportation of Persons.....	713	619	600	639	39
22 Transportation of Things.....	364	68	431	473	42
23 Rent, Communications, and Utilities.....	7,133	1,957	8,544	8,827	283
24 Printing and Reproduction....	897	946	919	1,051	132
25 Other Services.....	8,552	4,137	5,745	6,188	443
26 Supplies and Materials.....	3,984	1,331	3,747	3,872	125
31 Equipment.....	2,696	912	2,076	2,206	130
Acquisitions.....	450	184	678	828	150
32 Land and Structures.....	17	-0-	-0-	-0-	-0-
41 Grants.....	761	256	1,125	1,185	60
42 Insurance Claims and Indemnities.....	<u>1</u>	<u>-0-</u>	<u>3</u>	<u>2</u>	<u>-1</u>
Total.....	78,276	24,646	85,432 ^{/1}	89,033	3,601

^{/1} This amount includes requested supplemental funding of \$3,326 for the cost of the FY 1977 legislated pay raises.

SMITHSONIAN VISITORS
(By Fiscal Year)

Fiscal Year	Smithsonian Institution Building	Arts and Industries Building	Museum of Natural History	National Air & Space Building	Freer Gallery of Art	Museum of History & Technology ^{/1}	Fine Arts & Portrait Galleries ^{/2}	Renwick Gallery ^{/3}	Hirshhorn Museum & Sculpture Garden ^{/4}	Total ^{/5}
1961	1,024,526	2,912,371	2,047,973	987,858	130,746					7,103,474
1962	1,222,112	3,471,050	2,113,053	1,986,319	130,597					8,923,131
1963	1,630,280	3,534,182	2,288,397	2,673,618	183,359					10,309,836
1964	1,311,061	2,457,243	2,512,306	1,854,186	168,625	2,509,774				10,813,195
1965	1,065,635	2,028,175	3,051,472	1,705,683	210,972	5,091,776				13,153,713 ^{/6}
1966	870,010	1,746,715	2,988,006	1,494,922	222,089	4,829,112				12,150,854
1967	1,020,312	1,638,873	3,409,957	1,484,422	212,920	5,546,102				13,312,586 ^{/8}
1968	847,176	1,344,622	3,257,957	1,123,698	169,533	4,750,023	30,888			11,523,897 ^{/9}
1969	275,259 ^{/7}	1,493,141	2,916,749	1,225,959	179,374	4,174,071	166,177			10,430,730 ^{/9}
1970		2,557,155	3,269,791	1,839,373	217,305	5,483,555	216,523			13,583,702
1971	681,255	1,985,732	3,456,755	1,337,445	190,425	5,955,128	194,468			13,801,208
1972	819,617	2,306,071	3,414,640	1,104,151	230,475	6,808,526	246,657	105,186		15,055,323
1973	807,294	2,285,603	3,306,105	1,223,917	204,858	6,905,339	254,005	165,846		15,152,967
1974	739,651	2,040,731	3,067,694	1,285,598	219,346	5,850,227	329,487	175,672		13,708,406
1975	967,164	1,973,356	3,668,587	1,116,432	215,061	7,111,054	368,948	165,433	1,620,540	17,506,575
1976	1,033,803	592,400 ^{/10}	4,342,601	1,451,049 ^{/11}	225,257	6,318,964	465,231	222,351	1,587,628	16,239,284
T.Q.	291,808	543,007	1,535,613	3,062,254 ^{/11}	59,217	1,470,708	112,682	46,661	434,415	7,556,365

^{/1} Museum of History and Technology opened January 1964.

^{/2} National Collection of Fine Arts opened May 1968 and National Portrait Gallery in October 1968.

^{/3} Renwick Gallery opened January 1972.

^{/4} Hirshhorn Museum and Sculpture Garden opened October 1974.

^{/5} An additional 2-3,000,000 visitors to the National Zoological Park annually, 50,000 to the Anacostia Museum, and 60,000 to the Cooper-Hewitt Museum in New York are excluded from these totals.

^{/6} July-August 1964, certain Smithsonian Institution buildings were open 4:30 to 10 p.m. for the first time.

^{/7} Building closed for renovation October 1968.

^{/8} Reflects the significant decrease in visitors in the Nation's Capital in the first six months of CY 1968 due to unsettled local conditions.

^{/9} Fiscal year 1969 visitor totals represent the effect of local conditions in late 1968 on visitor attendance.

^{/10} Building closed for installation of "1876" exhibition September, 1975 through April, 1976.

^{/11} Old building closed November, 1975. Foyer of new museum opened to visitors February, 1976. New building completely opened July 1, 1976.

FINANCIAL REPORT

T. AMES WHEELER, TREASURER

THIS REPORT COVERS the fiscal year 1976 and the added three months' "Transition Quarter" (July 1–September 30, 1976), reflecting our change in fiscal year to conform with the new federal year beginning October 1st.

In this period the Institution continued to benefit from both strong governmental support and growth in nonfederal income. As shown in Table 1, federal appropriations received for operating purposes rose 12.7 percent to \$84,004,000 in fiscal year 1976, with an additional \$23,150,000 for the Transition Quarter; together, these appropriations amounted to 77 percent of the total operating support in the 15 months' period. Research grants and contracts provided another 11 percent, while nonfederal funds from gifts, endowments and our various auxiliary activities and concessions supplied the remaining \$16,438,000 or 12 percent of the total. For construction purposes, the Institution received an additional \$13,922,000 of federal appropriations and \$560,000 of gifts from private sources.

The increased income for the most part went to meet inflationary cost increases and to make possible the outstanding Smithsonian Bicentennial programs for the nation's capital, including the opening of the new National Air and Space Museum, a summer-long international folk festival on the Mall, and a wide variety of major exhibitions. Nearly \$10,000,000 of federal construction funds were used to continue the modernization of the National Zoo, while renovation of the Carnegie Mansion in New York City for the

October opening of the Cooper-Hewitt Museum and construction of the new Associates Court, public and staff restaurants and educational facilities in the National Museum of Natural History, were completed with nonfederal trust funds, derived principally from our fund-raising and Associates activities. This period also saw the completion of our Museum Shop construction and modernization program which will benefit visitors and the Institution alike.

A further step was taken toward the building of our present relatively small unrestricted-purpose endowment funds to a level capable of assuring stable financial support for nonfederally supported Institutional needs in the future; continuation and enlargement of this effort remains a goal of highest priority.

An overall picture of the application of all of these funds for operating purposes (exclusive of foreign currency and construction funds) by individual bureaux and offices may be seen in Table 2.

FEDERAL APPROPRIATIONS

The \$81,564,000 of federal funds received for Institutional operating purposes in the 12 months of fiscal year 1976, exclusive of funds for the Smithsonian Science Information Exchange, Inc., and the Excess Foreign Currency Programs, was an increase of \$10,858,000 over fiscal year 1975. Well over half of this increase (\$6.0 million), however, was provided merely to meet costs of legislated and other uncontrollable increases in federal salaries, plus sharp increases in utility rates and other inflationary cost increases. A further \$2,800,000 was made available to equip and staff the new National Air and Space Museum, and \$700,000 was added for our Bicentennial Program. A large part of the remaining \$1.4 million was needed for maintenance, protection, conservation, and other program support activities, with relatively little available for any expansion of programmatic efforts themselves. The resulting allocation by broad program categories is set forth in Table 3.

As the year progressed, it became possible to hold costs to lower amounts than originally anticipated; as a result, some \$1,271,000 of the \$104,193,000 combined appropriations for operating purposes in fiscal year 1976 and the Transition Quarter was returned to the United States Treasury.

For the Smithsonian Science Information Exchange, \$1,940,000 was provided for fiscal year 1976, and another \$521,000 for the

TABLE 1. Overall Sources of Financial Support
[In \$1,000's]

Sources	FY 1974	FY 1975	FY 1976	Trans. Quarter
OPERATING FUNDS				
Federal appropriation:				
Salaries and expenses	\$58,868	\$70,706	\$81,564	\$22,629
Smithsonian Science Information				
Exchange	1,695	1,805	1,940	521
Special Foreign Currency Program	4,500	2,000	500	-0-
Subtotal	\$65,063	\$74,511	\$84,004	\$23,150
Research grants and contracts	9,996	12,292	11,525	3,987
Nonfederal funds:				
Gifts (excluding gifts to endowments and Plant Funds)				
Restricted purpose	1,970	4,177	4,307	658
Unrestricted purpose	275*	253*	354*	66*
Income from endowment and current funds investment**				
Restricted purpose	1,750	1,724	1,634	503
Unrestricted purpose	747	953	1,110	264
Auxiliary activities (net)	1,770	2,308	3,390	1,147
Miscellaneous	1,110	1,405	2,299	706
Total Nonfederal Funds	7,622	10,820	13,094	3,344
Total Operating Support	\$82,681	\$97,623	\$108,623	\$30,481
CONSTRUCTION FUNDS				
Federal Construction Funds:				
National Zoological Park	\$ 3,790	\$ 9,420	\$ 8,390	\$ 1,440
National Air & Space Museum	17,000	7,000	2,500	-0-
Restoration & Renovation of Bldgs. ..	1,070	1,490	1,192	400
Total Fed. Construction Funds	\$21,860	\$17,910	\$12,082	\$ 1,840
Nonfederal Plant & Land Acquisition Funds				
Cooper-Hewitt Museum	\$ 262	\$ 162	\$ 425	\$ 30
Hirshhorn Museum	1,000	-0-	-0-	-0-
Chesapeake Bay Center	70	15	5	-0-
Anacostia Neighborhood Museum	-0-	10	-0-	-0-
National Zoological Park	-0-	-0-	100	-0-
Total Nonfederal Plant and Land Acquisition Funds	\$ 1,332	\$ 187	\$ 530	\$ 30

* Excluding gifts to Associates (included under Auxiliary Activities).

** Includes portion of investment gain appropriated to income under Total Return Policy.

TABLE 2. Source and Application of Operating Funds
Fifteen Months Ended September 30, 1976—continued
(Excludes Special Foreign Currency Funds, Plant Funds, and Endowments)
[In \$1,000's]

Funds		Nonfederal Funds										
		Total	Unrestricted	Restricted	Grants and							
Federal funds	non-federal funds	Auxiliary activities	Special purchases	General	and special tracts							
FUND BALANCES—												
1 July 1975	\$ -0-	\$ 9,317	\$ 3,767	\$ -0-	\$ 1,071	\$ 4,374	\$ 105					
FUNDS PROVIDED												
Federal Appropriations	\$106,654											
Investment Income		\$ 3,511	\$ 1,370	\$ -	\$ 4	\$ 2,137	\$ -					
Grants and Contracts		15,508					15,508					
Gifts		5,610	81	226	338	4,965						
Sales and Revenue		34,887		34,257	630							
Other		2,375	1,241		448	686						
Total Provided	\$106,654	\$61,891	\$2,692	\$34,483	\$1,420	\$ 7,788	\$15,508					
Total Available	\$106,654	\$71,208	\$6,459	\$34,483	\$2,491	\$12,162	\$15,613					
FUNDS APPLIED												
Science:												
Environmental Science	\$ 906	\$ 297	\$ 45	\$ -	\$ 12	\$ 27	\$ 213					
Natl. Museum of Nat. History	13,277	1,852	46	-	145	472	1,189					
Natl. Zoological Park	7,802	202	41	-	95	44	22					
Fort Pierce Bureau	-	601	-	-	-	601	-					
Science Info. Exchange	2,461	-	-	-	-	-	-					
Smithsonian Astrophysical Observatory	4,942	8,864	36	-	37	274	8,517					
Radiation Biology Lab.	2,057	130	-	-	3	11	116					
Smithsonian Tropical Research Institute	1,785	81	5	-	37	38	1					
Interdisciplinary Communications Program	-	1,528	23	-	-	12	1,493					
Natl. Air and Space Museum	6,933	745	52	-	252	265	176					
Other Science	1,541	1,758	74	-	37	224	1,423					
Total	41,704	16,058	322	-	618	1,968	13,150					
History and Art:												
Natl. Portrait Gallery	2,190	188	23	-	32	32	101					
Natl. Collection of Fine Arts	2,902	244	16	-	165	44	19					
Freer Gallery	573	1,511	-	-	-	1,464	47					
Natl. Museum of History and Technology	6,939	909	72	-	135	643	59					
Total Funds Applied						\$106,654	\$60,561	\$2,385	\$34,483	\$ 3	\$8,178	\$15,512
FUND BALANCES—												
30 September 1976						\$ -0-	\$10,647	\$4,074	\$ -0-	\$2,488	\$3,984	\$ 101

* Figures do not include revenues to SSIE from other sources of approximately \$1,500,000.

TABLE 3. *Application of Federal Appropriations*
Fiscal Year 1974 through Fiscal Year 1976
(Excluding Special Foreign Currency Program)
[In \$1,000's]

<i>Area</i>	<i>FY 1974</i>	<i>FY 1975</i>	<i>FY 1976</i>	<i>Trans. Quarter</i>
Science	\$24,884	\$29,423	\$32,808	\$ 8,896
History and Art	12,130	15,164	16,521	5,607
Public Service	2,696	2,333	2,413	1,285
Museum Programs	4,321	5,169	5,869	1,855
Administration	4,693	4,582	4,956	1,647
Building Maintenance and Protection ...	11,839	15,840	17,649	5,877
Total	<u>\$60,563</u>	<u>\$72,511</u>	<u>\$80,216</u>	<u>\$25,167</u>

Transition Quarter. The operations of this bureau have continued to expand both as to contribution into the research project data bank and also in providing summaries of such data requested by its customers. Payments for the latter services, suggested several years ago by the Office of Management and Budget and the Congress as an alternative to increased appropriations, are growing steadily and have proven very successful in allowing the Exchange to meet its total increase in costs with only minimal added federal support.

Federal funds for the Smithsonian's Foreign Currency Program, which provides grants to United States educational institutions for field research in those countries where these blocked foreign currencies remain available, were curtailed sharply in fiscal year 1976 to only \$500,000. Thus, usage of these funds, together with remaining prior-year balances, was limited primarily to supporting priority ongoing research needs (see Table 4).

Federal appropriations for the Institution's construction purposes in fiscal year 1976 and the Transition Quarter totaling \$13,922,000 included \$2,500,000 to complete the National Air and Space Museum, an amount which was \$500,000 less than anticipated at

TABLE 4. *Special Foreign Currency Program
Fiscal Year 1976 and Transition Quarter—Obligations*

Country	Arche- ology	System- atic & Environ- mental Biology	Astro- physics & Earth Sciences	Museum Pro- grams	Grant Adminis- tration	Total
Burma	\$ —	\$ —	\$ —	\$ 368	\$ —	\$ 368
Egypt	369,480	46,385	11,341	5,249	—	432,455
India	358,647	16,634	2,756	4,459	21,502	403,998
Pakistan	60,080	16,661	—	3,104	—	79,845
Poland	7,651	16,441	199,786	10,654	1,309	235,841
Tunisia	128,000	126,700	13,500	—	—	268,200
TOTAL	\$923,858	\$222,821	\$277,383	\$23,834	\$22,811	\$1,420,707*

* An additional \$83,000 was obligated through the National Science Foundation for the translation and printing of scientific publications in India and Pakistan requested by the Smithsonian Institution.

the beginning of construction. Another \$9,830,000 of the total allowed the continued gradual renovation of the National Zoo in accordance with its previously approved Master Plan. Major specific projects paid for with these appropriations included the service facility to consolidate support functions, new bear exhibits, continued planning for Beaver Valley exhibits, planning and installation of educational graphics, and repairs and renovation of Zoo facilities at the Rock Creek and Front Royal locations. An additional \$1,592,000 was granted for restoration and renovation of other Institutional buildings.

GRANTS AND CONTRACTS

Grants and contracts from federal agencies also provided substantial support to the Institution research programs over the past 15 months. During fiscal year 1976, \$11,525,000 was expended, roughly the same as in the prior fiscal year, and a further \$3,987,000 was expended during the Transition Quarter, primarily for work in the scientific disciplines. The major granting agencies are listed in Table 5 for this and prior periods representing hundreds of different grants and contracts each year.

TABLE 5. *Grants and Contracts*
[In \$1,000's]

<i>Federal Agencies</i>	<i>FY 1974</i>	<i>FY 1975</i>	<i>FY 1976</i>	<i>Trans. Quarter</i>
Atomic Energy Commission	\$ 72	\$ 84	\$ 85	\$ 48
Department of Commerce	184	242	218	90
Department of Defense	872	799	800	212
Department of Health, Education and Welfare	261	219	255	79
Department of Interior	283	246	272	48
Department of Labor	163	87	162	177
Department of State	1,066	1,549	1,252	242
National Aeronautics and Space Administration	5,308	7,670	6,222	1,845
National Endowments for the Arts and Humanities	102	420	451	174
National Science Foundation	690	502	432	128
Other	995	474	1,376	944
Total	<u>\$9,996</u>	<u>\$12,292</u>	<u>\$11,525</u>	<u>\$3,987</u>

The major recipient in the Institution is the Smithsonian Astrophysical Observatory which, as shown in Table 2, expended \$8,-517,000, or 55 percent of these funds; most of this support came from the National Aeronautics and Space Administration for such projects as satellite tracking and research and development of masers. Projects for other bureaux ranged from studies of the social behavior of harbor seals to analysis of herbicide concentrations in the Chesapeake Bay, and an oral history of jazz in the United States.

SMITHSONIAN TRUST FUNDS

The federal funds discussed above are provided to enable the Smithsonian to carry out its responsibilities for the preservation, research, and exhibition of the ever-growing national collections of valuable cultural, historic, and scientific objects; they constitute by far the largest source of income to the Institution as has been the case for nearly the past 100 years since the construction with appropriated funds of the Arts and Industries Building, completed in 1881. Nevertheless, the Smithsonian's own nonfederal trust funds remain the basic element of this unique Institution's financial

TABLE 6. *Total Trust Funds Income Fiscal Year 1976
and Transition Quarter*
[In \$1,000's]

Revenue Sources	Unrestricted Purposes			Total
	General & Auxiliary Activities	Special Purpose*	Restricted Purposes***	
FOR OPERATING PURPOSES:				
Investments	\$1,370	\$ 4	\$2,137	\$ 3,511
Gifts	82**	338	4,965	5,385
Auxiliary Activities (net)	4,537	—	—	4,537
Concessions and Miscellaneous	1,241	1,078	686	3,005
Total Operating Funds	<u>\$7,230</u>	<u>\$1,420</u>	<u>\$7,788</u>	<u>\$16,438</u>
FOR PLANT:				
Gifts —				
National Zoological Park	\$ —	\$ —	\$ 100	\$ 100
Chesapeake Bay Center	—	—	5	5
Cooper-Hewitt Museum	—	—	428	428
Total Gifts	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 533</u>	<u>\$ 533</u>
Miscellaneous —				
Cooper-Hewitt Museum	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 27</u>	<u>\$ 27</u>
Total Plant	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 560</u>	<u>\$ 560</u>
Grand Total	<u>\$7,230</u>	<u>\$1,420</u>	<u>\$8,348</u>	<u>\$16,998</u>

* Represents unrestricted income designated by management to be used only for specific purposes.

** Excluding \$226,000 gifts to Associates (included under Auxiliary Activities).

*** Excluding Grants and Contracts shown in Table 5.

structure as they have been ever since the Institution was established in 1846. In order for the Smithsonian to continue its position as an outstanding cultural and scientific resource for the entire nation, this important and flexible source of support must be maintained and strengthened. Efforts toward this goal were continued successfully in this Bicentennial period.

Most encouraging perhaps has been the continued success of the Associates program, including the *Smithsonian* magazine, and also our Museum Shops and related programs featuring sales of products based on interesting and informative items in the museum collections. National Associate memberships again rose sharply from just over 900,000 in June 1975 to about 1,300,000 in the Transition

TABLE 7. *Unrestricted Trust Funds*
General and Auxiliary Activities
(Excluding Special Purpose Funds and Gifts to Endowment)
[In \$1,000's]

<i>Item</i>	<i>FY 1974</i>	<i>FY 1975</i>	<i>FY 1976</i>	<i>Trans. Quarter</i>
INCOME				
General Income:				
Investments	\$ 744	\$ 950	\$1,107	\$ 263
Gifts	151	46	66	16
Concessions and miscellaneous	284	228	711	530
Total General Income	1,179	1,224	1,884	809
Auxiliary Activities (net):				
Associates	1,590	1,968	3,256	1,011
Shops	226	417	63	153
Press	(89)	(96)	(146)	(46)
Performing Arts	104	(79)	(110)	(9)
Product Development	37	218	458	122
Other Activities	(98)	(120)	(131)	(84)
Total Activities	1,770	2,308	3,390	1,147
Total Income	2,949	3,532	5,274	1,956
EXPENDITURES AND TRANSFERS				
Administrative Expense	3,957	4,780	5,024	1,530
Less Administrative Recovery	3,345	3,644	4,558	1,201
Net Administrative Expense	612	1,136	466	329
Less Transfers:				
To Special Purpose and Restricted Funds				
for Program Purposes	307	546	1,151	499
To Plant Funds	1,134	97	2,495	207
To Endowment Funds	121	1,463	1,021	755
NET GAIN (LOSS)	775	290	141	166
ENDING BALANCE	\$3,477	\$3,767	\$3,908	\$4,074

Quarter. Resident Associate members in the Washington area who participate here in special cultural, educational, and entertainment programs now exceed 40,000. In addition, Associates activities have now been expanded to extend certain Smithsonian events to about ten cities throughout the country each year.

While Museum Shop sales have increased, income was reduced in this period by the temporary closing of the Arts and Industries Building and by start-up expenses of new shops and our new mail

order catalogue. Improved results, however, are anticipated for the future, particularly with the completion of all the Shops, including those in the National Air and Space Museum and the National Museum of Natural History.

The unrestricted funds derived from all of these various programs have been used to cover Institutional administrative costs, to continue a program of small research grants, and to benefit the individual bureaux which share in the income from the concessions, Shops, and Product Development Program. The Associates, school children, and other visitors have benefited during the past year from the addition of new facilities in the Natural History Building. Income from the unrestricted funds enabled the Institution to take another step in its high-priority program of increasing its relatively small unrestricted-purpose endowment funds. With the addition

TABLE 8. *Auxiliary Activities for Fiscal Year 1976
and Transition Quarter*
[In \$1,000's]

<i>Item</i>	<i>Total</i>	<i>Mu- seum Shops</i>	<i>Smith- sonian Press*</i>	<i>Smith- sonian Asso- ciates</i>	<i>Per- form- ing Arts</i>	<i>Prod- uct De- velop- ment</i>	<i>Other**</i>
Sales and Revenues ..	\$34,079	\$5,274	\$ 265	\$26,061	\$1,006	\$730	\$ 743
Less Cost of Sales	16,501	3,057	220	13,114	110	—	—
Gross Income ..	17,578	2,217	45	12,947	896	730	743
Gifts	226	—	—	226	—	—	—
Other Income	178	44	44	30	16	—	44
Total Income ...	17,982	2,261	89	13,203	912	730	787
Expenses	12,133	1,795	266	8,179	884	128	881
Administrative Costs .	1,312	250	15	757	147	22	121
Income (Loss) Before Transfers	4,537	216	(192)	4,267	(119)	580	(215)
Less Transfers	894	77***	—	629	—	193***	(5)
Net Income (Loss) ...	\$ 3,643	\$ 139	\$ (192)	\$ 3,638	\$ (119)	\$387	\$ (210)

* The privately funded activities of the Press as opposed to the federally supported publication of research papers.

** Includes Traveling Exhibitions, Belmont Conference Center, Photo Sales, Center for Short-Lived Phenomena, Special Publications, and Television Programs.

*** Allocations to the Smithsonian bureaux participating in this program.

of \$1,750,000 during the 15-month period, these unrestricted endowment funds now total approximately \$7.5 million.

Special Purpose Funds, shown separately in Tables 2 and 6, include gifts and other income received directly by individual bureaux for their general use or set aside by Smithsonian management from general unrestricted funds for bureau programs or other specific uses. Income to these funds shown in Table 6 totaling \$1,420,000 in this period is only that portion received directly—from gifts, for example, or from Zoo parking receipts reserved for future expansion of its parking facilities, or from miscellaneous sales, performing arts admissions and rentals. Including funds from such items as interest payments and sharing of shop proceeds, royalties and concessions earnings, total income to these Special Purpose Funds in this period equaled \$2,665,000 and expenditures \$1,248,000. The balance in these funds as of September 30, 1976, was \$2,488,000, compared to \$1,071,000 on June 30, 1975 (see Balance Sheet on page 58 of this report).

A major portion of Smithsonian trust funds is restricted to specific bureaux or activities by designation. During fiscal year 1976 and the Transition Quarter, the Institution received \$7,788,000 of these restricted funds. Of this total, \$2,137,000 was income from Restricted Endowment Funds, \$4,965,000 was gifts and grants from individuals, foundations, and corporations, and \$686,000 represented miscellaneous receipts, such as those from sales desks, benefits, and membership fees.

The major units receiving these funds are shown in Table 9. The Freer Gallery of Art and the Fort Pierce Bureau were both provided for in large measure by endowment dedicated to their use; the other restricted endowments, detailed more fully below, support a wide range of projects throughout the Institution. Principal activities benefiting from gifts and grants during this period include the Maritime Hall project of the National Museum of History and Technology, the Cooper-Hewitt Museum, the Freer Gallery of Art, the Division of Performing Arts (which produced the extended Festival of American Folklife on the Mall), and the Hillwood Museum, which at the end of the fiscal year was transferred to the Marjorie Merriweather Post Foundation of D.C. Gifts and grants also represent a major source of support for programs in other areas, and the Institution is extremely grateful for this public sup-

TABLE 9. *Restricted Operating Trust Funds,* Fiscal Year 1976
and Transition Quarter*

[In \$1,000's]

Fund	Income			Total In- come	De- duc- tions	Trans- fers In (Out)	Net In- crease (De- crease)	Fund Bal- ance End of Year
	In- vest- ment	Gifts	Misc.					
Anacostia Neighbor- hood Museum	\$ -	\$ 136	\$ -	\$ 136	\$ 68	\$ 6	\$ 74	\$ 64
Archives of American Art	3	41	141	185	316	20	(111)	209
Natl. Mus. of Hist. & Technology								
—American Bank- ing Exhibit	-	-	-	-	257	-	(257)	15
—American Mari- time Hall	-	232	-	232	198	20	54	239
—Person to Per- son Exhibit	-	204	-	204	6	-	198	198
Cooper-Hewitt Museum								
—Operations	7	21	180	208	348	140	-	-
—Special Purpose Funds	-	55	22	77	336	10	(249)	557
Division of Per- forming Arts	-	1,467	-	1,467	1,783	(24)	(340)	2
Fort Pierce Bureau ..	754	-	9	763	601	(83)	79	88
Freer Gallery	955	291	276	1,522	1,464	11	69	194
Hillwood	-	407	14	421	519	-	(98)	2
National Air and Space Museum ...	36	243	-	279	265	95	109	906
Woodrow Wilson Center**	-	724	1	725	655	15	85	326
Other	382	1,144	43	1,569	1,541	(31)	(3)	1,184
	<u>\$2,137</u>	<u>\$4,965</u>	<u>\$686</u>	<u>\$7,788</u>	<u>\$8,357</u>	<u>\$179</u>	<u>\$ (390)</u>	<u>\$3,984</u>

* Excluding Grants and Contracts shown in Table 5 and also Restricted Plant Funds included in Table 6.

** Included herein even though federal funds of the Center are not a part of this Report, since the Smithsonian is by legislative act the official recipient and custodian.

port. A partial list of our donors is included at the end of this report (page 51), but particular mention should be made of the grants from American Airlines and General Foods Corporation for the Folklife Festival, as well as a gift from the Tobacco Institute for the Hall of American Maritime Enterprise.

The Archives of American Art, the Cooper-Hewitt Museum, and the Freer Gallery of Art also support their activities through such fund-raising efforts as auctions and tours, as well as sales desks, which are included under miscellaneous receipts.

Generous support was also received during the year for the renovation of the Carnegie Mansion of the Cooper-Hewitt Museum. Due in great measure to a matching grant in this period from the Carnegie Corporation, as well as a gift from Mr. Henry J. Heinz II, the Museum was able to open to the public in October 1976. A welcome and specific bequest from the Estate of Dr. Ivy A. Pelzman allowed us to construct a glockenspiel in the National Zoological Park.

TABLE 10. *Endowment and Similar Funds**
Summary of Investments September 30, 1976

<i>Accounts</i>	<i>Book Value</i>	<i>Market Value</i>
INVESTMENT ACCOUNTS		
Consolidated Endowment Funds:		
Cash and Equivalents	\$ 991,037	\$ 991,037
Bonds	5,739,461	5,685,631
Convertible Bonds	2,555,694	2,622,258
Stocks	31,987,962	34,333,972
Total	<u>\$41,274,154</u>	<u>\$43,632,898</u>
Miscellaneous:		
Cash	\$ -0-	\$ -0-
Bonds	9,769	9,900
Common Stocks	3,572	16,206
Total	<u>\$ 13,341</u>	<u>\$ 26,106</u>
Total Investment Accounts	<u>\$41,287,495</u>	<u>\$43,659,004</u>
Other Accounts:		
Notes Receivable	\$ 46,169	\$ 46,169
Loan to U.S. Treasury in Perpetuity	1,000,000	1,000,000
Total Other Accounts	<u>\$ 1,046,169</u>	<u>\$ 1,046,169</u>
Total Endowment and Similar Fund		
Balances	<u>\$42,333,664</u>	<u>\$44,705,173</u>

* Includes both true endowments, whose income only may be expended, and quasi endowments, whose principal as well as income may be used for current purposes on approval of the Board of Regents.

ENDOWMENT AND SIMILAR FUNDS

As of September 30, 1976, the Smithsonian had total endowment funds with a market value of \$44,705,000, including \$1,000,000 on permanent deposit in the United States Treasury, \$72,000 of miscellaneous securities, and the Consolidated Endowment Fund of \$43,633,000 (see Table 10). Income from these funds is primarily restricted to specific purposes. The Consolidated Endowment Fund

TABLE 11. *Market Values of Consolidated Endowment Funds**

[In \$1,000's]

<i>Fund</i>	<i>6/30/72</i>	<i>6/30/73</i>	<i>6/30/74</i>	<i>6/30/75</i>	<i>9/30/76</i>
Unrestricted	\$ 5,102	\$ 4,759	\$ 3,906	\$ 5,654	\$ 7,477
Freer	21,973	18,279	14,250	15,744	16,035
Endowment No. 3	14,641	13,196	11,128	12,321	12,701
Restricted	8,185	7,634	6,266	7,148	7,420
Total	<u>\$49,901</u>	<u>\$43,868</u>	<u>\$35,550</u>	<u>\$40,867</u>	<u>\$43,633</u>

* Not including Endowment Funds of \$1,000,000 held in the United States Treasury, carrying 6 percent interest, nor minor amount of miscellaneous securities treated separately.

TABLE 12. *Changes in Consolidated Endowment Funds for Fiscal Year 1976 and Transition Quarter*

[In \$1,000's]

<i>Fund</i>	<i>Market value 6/30/75</i>	<i>Gifts and trans- fers</i>	<i>Inter- est and divi- dends*</i>	<i>In- come paid out</i>	<i>Sub- total</i>	<i>In- crease in mar- ket value</i>	<i>Market value 9/30/76</i>
Unrestricted funds.	\$ 5,654	\$1,801	\$ 270	\$ 356	\$ 7,369	\$ 108	\$ 7,477
Freer Fund	15,744	—	727	955	15,516	519	16,035
Endowment No. 3.	12,321	83	572	751	12,225	476	12,701
Restricted funds ..	7,148	119	333	405	7,195	225	7,420
Total**	<u>\$40,867**</u>	<u>\$2,003</u>	<u>\$1,902</u>	<u>\$2,467</u>	<u>\$42,305</u>	<u>\$1,328</u>	<u>\$43,633**</u>

* Income earned less managers fees.

** Not including Endowment Funds of \$1,000,000 held in the United States Treasury, carrying 6 percent interest, nor minor amount of miscellaneous securities treated separately.

TABLE 13. Consolidated Endowment Funds
September 30, 1976

Funds participating in pool	Principal		Income	
	Book value	Market value	1976 Net income	Unexpended balance
UNRESTRICTED FUNDS	\$ 7,496,759	\$ 7,477,358	\$ 356,035	\$422,819
FREER	14,894,209	16,034,710	954,762	189,323
ENDOWMENT NO. 3	11,993,400	12,701,121	751,347	-0-
RESTRICTED FUNDS:				
Abbott, William L.	195,888	211,369	12,586	2,944
Armstrong, Edwin James	4,255	4,034	231	-0-
Arthur, James	56,474	79,316	4,723	1,002
Bacon, Virginia Purdy	172,335	164,962	9,843	16,568
Baird, Spencer Fullerton	51,980	70,900	4,222	966
Barney, Alice Pike	40,505	56,838	3,384	6,290
Barstow, Frederic D.	1,878	2,024	121	2,023
Batchelor, Emma E.	62,954	58,793	3,500	12,354
Beauregard, Catherine				
Memorial Fund	72,690	78,986	3,857	1,784
Becker, George F.	295,950	285,518	17,000	22,596
Brown, Roland W.	48,110	54,208	2,645	11,170
Canfield, Frederick A.	52,687	87,388	5,204	-0-
Casey, Thomas Lincoln	23,557	25,464	1,516	1,777
Chamberlain, Frances Lea	39,770	55,808	3,323	6,373
Cooper, G. Arthur, Curator's Fund	3,437	3,447	154	-0-
Cooper-Hewitt Museum	150,054	137,053	7,231	-0-
Desautels, Paul E.	13,289	15,103	813	-0-
Div. of Mammals Curator Fund ..	3,153	3,242	49	1,500
Div. of Reptiles Curator Fund	1,088	1,085	158	315
Drake, Carl J.	280,259	275,772	13,251	35,605
Dykes, Charles	80,909	87,414	5,205	10,159
Eickemeyer, Florence Brevoort ...	15,352	21,533	1,282	4,142
Guggenheim, David and Florence .	226,910	203,519	9,937	-0-
Hanson, Martin Gustav and				
Caroline Runice	16,707	18,050	1,075	1,578
Henderson, Edward P.				
Meteorite Fund	577	705	37	70
Hillyer, Virgil	12,352	13,354	795	4,197
Hitchcock, Albert S.	2,223	3,177	189	425
Hrdlicka, Ales and Marie	88,282	98,745	5,880	4,003
Hughes, Bruce	27,026	37,978	2,261	20,357
Johnson, E. R. Fenimore	15,347	13,365	796	6,161
Kellogg, Remington, Memorial ...	46,085	39,515	2,333	4,625
Kramar, Nada	5,049	5,162	61	60
Lindsey, Jessie H.	1,277	1,302	38	952
Loeb, Morris	164,038	179,019	10,659	-0-
Long, Annette E. and Edith C.	764	1,106	66	125
Lyons, Marcus Ward	8,230	7,216	429	-0-
Maxwell, Mary E.	27,695	38,912	2,317	5,155
Myer, Catherine Walden	37,972	41,029	2,443	5,218
Nelson, Edward William	33,969	44,065	2,624	4,713

TABLE 13. Consolidated Endowment Funds
September 30, 1976—continued

<i>Funds participating in pool</i>	<i>Principal</i>		<i>Income</i>	
	<i>Book value</i>	<i>Market value</i>	<i>1976 Net income</i>	<i>Unexpended balance</i>
Noyes, Frank B.	1,819	2,068	124	1,459
Pell, Cornelia Livingston	13,942	15,146	901	3,219
Petrocelli, Joseph, Memorial	10,461	14,760	879	8,048
Ramsey, Admiral and Mrs. DeWitt Clinton	479,025	422,240	25,958	2,926
Rathbun, Richard, Memorial	20,001	21,702	1,292	12,088
Reid, Addison T.	33,426	36,112	2,151	1,299
Roebeling Collection	170,580	238,034	14,174	-0-
Roebling Solar Research	46,623	46,661	2,778	714
Rollins, Miriam and William	291,116	356,419	20,821	2,452
Ruef, Bertha M.	59,854	52,082	3,101	4,387
Smithsonian Agency Account	230,762	219,868	12,124	1,198
Sprague, Joseph White	2,152,156	2,132,615	102,471	10,680
Springer, Frank	25,604	35,520	1,839	19,887
Stevenson, John A.	8,957	9,650	471	70
Strong, Julia D.	18,801	20,393	1,214	5,290
T. F. H. Publications, Inc.	24,349	24,457	983	7,870
Walcott, Charles D.	187,767	221,727	10,654	327
Walcott, Charles D. and Mary Vaux	649,902	911,358	54,266	17,514
Walcott Botanical Publications ...	82,223	110,553	6,582	6,151
Zerbee, Francis Brinckle	1,341	1,868	112	1,752
Total Restricted Funds	\$ 6,889,786	\$ 7,419,709	\$ 405,133	\$302,538
Total Consolidated Endowment Funds	\$41,274,154	\$43,632,898	\$2,467,277	\$914,680

consists of the Freer Fund, whose income supports the operation of the Freer Gallery of Art, Endowment Fund No. 3, used for oceanographic research at the Fort Pierce Bureau in Florida, and a great number of smaller restricted and unrestricted funds (listed in Table 13) for a variety of research and museum projects. Unrestricted endowment funds totaled \$7,477,000, or 17 percent of the total. Separate accounting records are, of course, maintained on each of these various endowments, but for investment purposes they have been pooled since June 1, 1974, into the one fund. Market values of the Consolidated Endowment Fund since 1972 are shown in Table 11.

The investment management of the endowment funds of the Institution, with the exception of \$1,000,000 on permanent deposit and the miscellaneous securities, is conducted by three professional advisory firms, under the close surveillance of the Investment Policy Committee and the Treasurer, and is subject to policy guidelines set by the Smithsonian's Board of Regents. As described in prior reports, the Institution follows the total return policy, adopted by the Board of Regents in 1972, under which income is paid by each individual endowment fund at the annual rate of 4½ percent of the running 5-year average of market values, adjusted for additions or withdrawals of capital.

As indicated previously, the Smithsonian in this last fiscal period was able to transfer \$1,750,000 from current unrestricted income into endowment funds, in furtherance of its goal to increase such funds to a level more in proportion to the present operations of the Institution. Every effort will be made to continue this practice in future years.

The changes in the Consolidated Endowment Funds over the past 15 months, due to transfers, reinvestment of income, donations, and values in the securities markets, are shown in Table 12. The increase in market value during this period indicates a market performance roughly in line with the major market indexes. Income of \$2,467,000, net of managers' and custodial fees, was paid out during the 15-month period under the total return policy; this was \$565,000 greater than the \$1,902,000 from dividends and interest yield. A breakdown of the income to the various funds participating in the Consolidated Endowment Funds is shown in Table 13, together with the book and market values of these funds. Table 10 provides detail on the types of securities held by the Institution. A listing of the individual investments held in the Consolidated Endowment Funds at September 30, 1976, may be obtained upon request to the Treasurer of the Institution.

ACCOUNTING AND AUDITING

The nonfederal Trust Funds of the Institution are audited annually by independent public accountants as they have been at the direction of the Executive Committee of the Board of Regents since 1909. Their report for fiscal year 1976 and the Transition Quarter

is contained in the following pages, including a comparative balance sheet and a statement of the changes in various fund balances.

The Defense Contract Audit Agency annually performs an audit on grant and contract moneys received from federal agencies. In addition, the federally appropriated funds of the Institution are subject to audit by the General Accounting Office which, at year's end, was conducting a general review of Smithsonian finances. The internal audit staff continued its program of selective audits during the year, contributing to continued improvements in administrative and financial management.

Gifts and Bequests to the Smithsonian

The Smithsonian Institution gratefully acknowledges gifts and bequests received during fiscal year 1976 from the following:

\$100,000 or more:

American Airlines Incorporated	The Ford Foundation
American Telephone and Telegraph Company	General Foods Corporation
Carnegie Corporation of New York	Hillwood Trust
Estate of Edith Ehrman	Mr. and Mrs. David Packard
Federal Republic of Germany	Estate of Ivy A. Pelzman
	The Rockefeller Foundation

\$10,000 or more:

Alcoa Foundation	Crane Co.
Anonymous	Dr. and Mrs. William H. Crocker
Appalachian Power Company	Crowley Maritime Corporation
The Arcadia Foundation	John Deere Foundation
The Barra Foundation, Inc.	Diamond Shamrock
BASF Wyandotte Corporation	The Henry L. and Grace Doherty Charitable Foundation, Inc.
Margaret T. Biddle Foundation	Doubleday & Company, Inc.
Mr. George Barry Bingham, Jr.	The Dow Chemical Company
Miss Helen W. Buckner	The T. M. Evans Foundation
The Morris and Gwendolyn Cafritz Foundation	EXXON Corporation
Calhoon Meba Engineering School	Federal Barge Lines, Inc.
CBS Foundation, Inc.	Max C. Fleischmann Foundation
Ceramica-Stiftung	FMC Foundation
Certain-teed Products Corporation	Ford Motor Company
Chevron Chemical Company	Gulf Oil Corporation
The Coca Cola Company	Dr. and Mrs. Herbert Hawkes
The Edna McConnell Clark Foundation	Mr. H. J. Heinz II
	The Higbee Company

Mrs. Patricia Kendall Hurd	Relm Foundaton
International Business Machines Corporation	Mr. and Mrs. Ralph C. Rinzler
S. C. Johnson and Son	Rockefeller Brothers Fund
The J. M. Kaplan Fund, Inc.	Mr. John D. Rockefeller III
Samuel H. Kress Foundation	Rohm and Haas Company
Mrs. Edith MacGuire	Shell Oil Company
Richard King Mellon Foundation	Lewis and Rosa Strauss Memorial Fund
The Charles E. Merrill Trust	Mr. and Mrs. Bertrand L. Taylor III
Estate of Mr. William A. Mitchell	The Tinker Foundation
Mr. Benjamin B. Morgan	The Tobacco Institute, Inc.
Mr. and Mrs. Thomas B. Morgan	Tupper Foundation
Philip Morris Incorporated	Union Mechling Corporation
Estate of Alfred Mussinan	United States Steel Foundation, Inc.
National Geographic Society	University of Notre Dame
New York State Council on the Arts	Dr. and Mrs. Jeremy P. Waletsky
Edward John Noble Foundation	DeWitt Wallace Fund, Inc.
Northrop Corporation	The Washington Post
Occidental Petroleum Corporation	Water Transport Association
The Ohio River Company	Mr. Thomas J. Watson, Jr.
Otis Elevator Company	The Weatherhead Foundation
Pepsico Foundation, Inc.	Wells Fargo Bank
Pew Memorial Trust	Western Union Corporation
Pfizer, Inc.	Matilda Wilson Fund
Phelps Dodge Corporation	Women's Committee of the Smithsonian Associates
The Marjorie Merriweather Post Foundation of D.C.	World Wildlife Fund

\$1,000 or more:

Mr. Frederick R. Adler	American University
AKC Fund, Inc.	Amos Press, Incorporated
Aldine Publishing Company	Anonymous
The Alvord Foundation	Art Associaton of Newport Rhode Island
Amax Foundation, Inc.	Ashland Oil, Inc.
American Can Company	The Vincent Astor Foundation
American Cyanamid Company	Avanti Motor Corporation
American Institute of Marine Underwriters	Bank of America Foundation
American International Underwriters Corporation	The Barra Foundation
American Metal Climax Foundation	Mrs. Evelyn F. Bartlett
American Ornithologists Union	The Bass Foundation
American Security and Trust Company	Bath Iron Works Corporation
American Sign & Indicator Corporation	Mr. Henry C. Beck, Jr.
American Studies Association	The Bedminster Fund, Inc.
	The Bendix Corporation
	Beneficial Foundation, Inc.
	Estate of Joseph Bernstein

Bethlehem Steel Corporation	Eastern States Sign Council, Inc.
Mrs. Elizabeth C. Booker	Eastman Kodak
Mr. Daniel J. Boorstin	Eaton Corporation
Borden, Inc.	Mr. Robert Ellsworth
The Boswell Oil Company	Mr. Alfred U. Elser, Jr.
Mrs. Beulah Boyd	The Charles Engelhard Foundation
Mrs. John L. Bradley	The Equitable Life Assurance Society
Brent Towing Company, Inc.	of the United States
Mrs. Mabel A. B. Brooks	EXXON Company, U.S.A.
Mr. John Nicholas Brown	Miss Frances J. Fahnestock
Mr. and Mrs. Keith S. Brown	First National City Bank
Bucyrus-Erie Company	Mrs. Bella Fishko
Bunge Corporation	Fluor Corporation
Mr. John A. Burnham, Jr.	Ford's Theatre Society
Butterick Fashion Marketing	Foremost McKesson, Inc.
Company	Mr. Hamilton C. Forman
Cables Electricos Ecuatorianos C.A.	Mr. S. S. Forrest, Jr.
Mr. Robert P. Caldwell	Foss Launch & Tug
Canal Barge Company, Inc.	Friends of Music at the Smithsonian
Cargo Carriers, Incorporated	G & C Towing Inc.
Guy Carpenter & Co., Inc.	General Electric Company
Castle & Cooke, Inc.	Dr. Gordon D. Gibson
Caterpillar Tractor Company	Gladders Barge Line, Inc.
Central Telephone & Utilities	G. W. Gladders Towing Company,
Corporation	Inc.
Centran Bank of Akron	The Griffis Foundation, Inc.
Champion Spark Plug Company	Mr. Melville Bell Grosvenor
CIBA-CEIGY Corporation	Carter Hawley Hale Stores, Inc.
City Investing Company	Edith Gregor Halpert Foundation
Mr. Peter Clark	Hallmark Educational Foundation
Continental Bank International	Mr. Armand Hammer
Mr. and Mrs. Kenneth W. Cooper	The Honorable Averell W. Harriman
Copernicus Society of America	Professor George W. Hilton
Corinthian Broadcasting Corporation	Janet A. Hooker Charitable Trust
Miss Dorothy Corliss	Johns Hopkins University
Mrs. Rosemary B. Corroon	Hughes Aircraft Company
Miss Nina J. Cullinane	Ingersoll-Rand Company
Mr. Nathan Cummings	Ingram Barge Company
Royal Danish Embassy	Interdisciplinary Communications
Mr. and Mrs. Ron Dante	Associates, Inc.
Dillingham Corporation	Interstate Oil Transport Company
Dixie Carriers, Inc.	IU International
Joseph C. Domino, Inc.	The JDR 3rd Fund
Mr. William W. Donnell	Johnson & Higgins
Dravo Corporation	Mrs. Ruth Cole Kainen
Alice and Leonard Dreyfuss	Charles F. Kettering Foundation
Foundation	Mr. Irving Kingsford
Duke University	The Alice G. K. Kleberg Fund
Earhart Foundation	Estate of Nada Kramar

The Lauder Foundation	Propeller Club of Houston
Mr. Cyrus J. Lawrence	Propeller Club Port of New York
Mrs. Halleck Lefferts	Reynolds Metals Company
The Liberian Foundation, Inc.	Miss Esther M. Ridder
Howard & Jean Lipman Foundation, Inc.	The Ridgefield Foundation
Lober Charitable Fund	The Riggs National Bank of Washington, D.C.
Mrs. Elizabeth B. Loch	Josephine C. Robinson Foundation
Mrs. John E. Long	Mr. Steven Rockefeller
Mr. Joseph O. Losos	Madame Augusto Rosso
S. C. Loveland Co., Inc.	Charles E. Sampson Memorial Fund
The Magowan Family Foundation, Inc.	Mr. A. A. Seeligson, Jr.
Mr. and Mrs. William A. Marsteller	Miss Gertrude Hochschild Sergievsky
Massey-Ferguson Limited	The Sidney Printing and Publishing Company
Louis B. Mayer Foundation	Sign & Display Industry Promotion Fund
Chauncey and Marion Deering McCormick Foundation	Mr. and Mrs. Leonard L. Silverstein
Mr. Vasco McCoy, Jr.	Charles E. Smith Family Foundation
The Honorable George C. McGhee	Sperry Rand Corporation
Mr. and Mrs. Eugene McHenry	The Seth Sprague Educational and Charitable Foundation
Mr. Robert S. McNamara	Standard Oil Company of California
Mr. Giles Mead	Stauffer Chemical Company
Merck and Co., Inc.	Miss Elizabeth Stein
Mobil Foundation, Inc.	Mrs. Matthew W. Stirling
Morgan Guaranty Trust Company	Stroheim & Romann
Mote Marine Laboratory	Mr. and Mrs. E. Hadley Stuart, Jr.
Mr. and Mrs. John Mudd	Mary Horner Stuart Foundation
National Maritime Union of America	Sumner Gerard Foundation
National Research Council	The Symonds Foundation
Mr. and Mrs. John U. Nef	Mrs. Carola Terwilliger
New World Records	Time Incorporated
Nissan Motor Corporation, U.S.A.	Todd Shipyards Corporation
Olive Bridge Fund Inc.	Toyota Motor Sales, U.S.A., Inc.
Outdoor Advertising Association of New Jersey	Transportation Institute
Palisades Foundation, Inc.	Mr. John J. Trelawney
The Park Foundation	T.R.W. Foundation, Inc.
Patcraft Mills	Marcia Brady Tucker Foundation, Inc.
Peretz Fund of the Combined Jewish Philanthropies of Greater Boston, Inc.	Union Oil Company of California
Pfizer International, Inc.	Upper Mississippi Towing Corporation
The Pioneer Foundation	U.S. Independent Telephone Association
Mr. M. P. Potamkin	The Valley Line Company
PPG Industries, Inc.	Mr. and Mrs. Thomas Waaland
Frederick Henry Prince Trust 7/9/47	Mr. Richard W. Weatherhead
Procter & Gamble Fund	Wedgwood
Propeller Club of Port Everglades	Ellen Bayard Weedon Foundation

\$1,000 or more—continued

Willcox, Baringer
F. W. Woolworth Co.
World Sign Associates

Charles W. Wright Foundation of
Badger Meter, Inc.

\$500 or more:

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American Honda Motor Co., Inc.
Mr. William S. Anderson
Mrs. Anna Bing Arnold
Mr. James C. Barbour
The Becton, Dickinson Foundation
Mr. Arthur H. Bissell, Jr.
Mr. George S. Breidenback
Brilliant Electric Signs, Inc.
Mr. John Lee Bunce
Mr. and Mrs. Emile L. Cahn
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E. H. Edwards Company
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Dr. and Mrs. Robert Fox
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Colonel and Mrs. Robert W. Fuller III
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General Stevedores, Inc.
The Rev. and Mrs. C. Leslie Glenn
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Company
Mr. and Mrs. Robert Grant, Jr.
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Miss Gertrude Heare
The Sidney L. Hechinger Foundation
Mr. and Mrs. Frank C. Henderson
Mrs. Amy E. Higgins
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Mr. and Mrs. Thomas F. Hogan
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New York
Outdoor Advertising Association of
Texas
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Propeller Club of the United States, Port of Boston, Inc.	Mr. Stephen Sloan
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	Mrs. Anthony T. Wilson
	Mr. and Mrs. James A. Wise
	Mr. and Mrs. John O. Zimmerman

We also gratefully acknowledge other contributions in excess of \$200,000 received from approximately 4,000 contributors in 1976.

PEAT, MARWICK, MITCHELL & CO.

CERTIFIED PUBLIC ACCOUNTANTS
1025 CONNECTICUT AVENUE, N.W.
WASHINGTON, D.C. 20036

The Board of Regents
Smithsonian Institution:

We have examined the balance sheet of the Trust Funds (formerly designated as Private Funds) of Smithsonian Institution as of September 30, 1976 and the related statement of changes in fund balances for the fifteen months then ended. Such statements do not include the accounts of the National Gallery of Art, the John F. Kennedy Center for the Performing Arts, nor other departments, bureaus and operations administered by the Institution under Federal appropriations as detailed in note 2 to the financial statements. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the aforementioned financial statements present fairly the financial position of the Trust Funds of Smithsonian Institution at September 30, 1976 and the changes in its fund balances for the fifteen months then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

PEAT, MARWICK, MITCHELL & CO.

December 3, 1976

SMITHSONIAN INSTITUTION—TRUST FUNDS

Balance Sheet

September 30, 1976 (with comparative figures at June 30, 1975)

Assets		1976	1975	Liabilities and Fund Balances		1976	1975
CURRENT FUNDS:				CURRENT FUNDS:			
Cash:				Note payable—secured	\$		95,920
In U. S. Treasury		\$ 820,381	543,741	Accounts payable and accrued liabilities		2,770,747	3,261,971
In banks and on hand		694,934	234,479	Due to plant funds		41,836	461,266
Total cash		1,515,315	778,220	Due to agency funds		371,990	386,507
Investments (note 3)		8,149,723	10,149,875	Due to endowment and similar funds		553,725	316,043
Receivables:				Deferred income:			
Accounts and notes, less allowance for doubtful accounts of \$446,000 (\$340,000 in 1975)		4,821,815	1,882,057	Magazine subscriptions		7,855,793	5,215,531
Advances—travel and other		448,200	454,775	Other		1,354,519	655,955
Unbilled costs and fees—grants and contracts		2,219,357	2,271,060	Total liabilities		12,948,610	10,393,013
Due from agency funds		—	246,032	Fund balances:			
Total receivables		7,489,372	4,853,924	Unrestricted:			
Inventories		1,937,426	1,118,688	General purpose		4,074,326	3,767,375
Prepaid expenses		951,127	462,278	Special purpose		2,488,013	1,071,155
Deferred expenses		2,482,308	1,749,229	Total unrestricted		6,562,339	4,838,530
Capitalized improvements and equipment, used in income producing activities, net of accumulated depreciation and amortization of \$724,198 (\$537,538 in 1975)		1,069,862	597,610	Restricted		4,084,184	4,478,281
Total current funds		\$23,595,133	19,709,824	Total fund balances		10,646,523	9,316,811
				Total current funds		\$23,595,133	19,709,824
ENDOWMENT AND SIMILAR FUNDS:				ENDOWMENT AND SIMILAR FUNDS:			
Cash, net of receivables and payables on securities transactions		437,312	41,063	Fund balances:			
Notes receivable		46,169	48,354	Endowment		32,654,170	33,354,530
Due from current funds		553,725	316,043	Quasi-endowment:			
Investments (note 3)		40,296,458	40,015,177	Restricted		2,196,108	2,224,323
Loan to U. S. Treasury in perpetuity at 6%		1,000,000	1,000,000	Unrestricted		7,483,386	5,841,784
Total endowment and similar funds		\$42,333,664	41,420,637	Total quasi-endowment		9,679,494	8,066,107
				Total endowment and similar funds		\$42,333,664	41,420,637
PLANT FUNDS:				PLANT FUNDS:			
Due from current funds		41,836	461,266	Mortgage notes payable (note 4)		204,822	269,718
Real estate (note 4)		9,875,562	6,230,034	Accrued liabilities		3,652	10,120
Total plant funds		\$ 9,917,398	6,691,300	Fund balances:			
				Acquisition fund:			
				Unrestricted		37,499	379,827
				Restricted		685	71,319
				Investment in plant		38,184	451,146
				Total plant funds		9,670,740	5,960,316
				Total plant funds		\$ 9,917,398	6,691,300
AGENCY FUNDS:				AGENCY FUNDS:			
Investments		10,000	10,000	Due to current funds		—	246,032
Due from current funds		371,990	386,507	Deposits held in custody for others		381,990	150,475
Total agency funds		\$ 381,990	396,507	Total agency funds		\$ 381,990	396,507

See accompanying notes to financial statements.

SMITHSONIAN INSTITUTION—TRUST FUNDS
Statement of Changes in Fund Balances
Fifteen Months ended September 30, 1976

Current funds

	Total current funds	Unrestricted				Restricted	Endowment and similar funds	Plant funds	
		Total unrestricted funds	General purpose	Auxiliary activities	Special purpose			Acquisition	Investment in plant
REVENUE AND OTHER ADDITIONS:									
Auxiliary enterprises revenue	\$34,887,301	34,887,301	—	34,257,621	629,680	—	—	—	—
Federal grants and contracts	15,507,598	—	—	—	—	15,507,598	—	—	—
Investment income (net of \$136,759 management and custodian fees)	2,944,185	1,285,137	1,281,462	—	3,675	1,659,048	—	320	—
Gains (losses) on sale of securities	2,303	2,303	2,303	—	—	—	(533,929)	—	—
Gifts, bequests and foundation grants	5,609,957	645,285	81,244	225,576	338,465	4,964,672	69,373	532,743	—
Additions to equity in real estate	—	—	—	—	—	—	—	—	3,710,424
Rentals, fees and commissions	2,010,095	2,010,095	1,749,863	—	260,232	—	—	—	—
Other—net	940,230	254,586	66,605	—	187,981	685,644	—	27,344	—
Total revenue and other additions	61,901,669	39,084,707	3,181,477	34,483,197	1,420,033	22,816,962	(464,556)	560,407	3,710,424
EXPENDITURES AND OTHER DEDUCTIONS:									
Research and educational expenditures	21,776,720	1,688,924	820,432	—	868,492	20,087,796	—	—	—
Administrative expenditures	5,733,615	1,945,545	550,206	1,311,705	83,634	3,788,070	—	—	—
Auxiliary enterprises expenditures	28,930,162	28,930,162	—	28,634,061	296,101	—	—	3,605,255	—
Expended for real estate and equipment	40,283	—	—	—	—	40,283	—	64,896	—
Retirement of indebtedness	—	—	—	—	—	—	—	16,812	—
Interest on indebtedness	—	—	—	—	—	—	—	3,686,963	—
Total expenditures and other deductions	56,480,780	32,564,631	1,370,638	29,945,766	1,248,227	23,916,149	—	—	—
TRANSFERS AMONG FUNDS—ADDITIONS (DEDUCTIONS):									
Mandatory—principal and interest on notes	(81,708)	(81,708)	(81,708)	—	—	—	—	81,708	—
Portion of investment gain appropriated	555,074	86,060	86,060	—	—	469,014	(555,074)	—	—
For plant acquisition	(2,631,886)	(2,631,886)	(2,620,386)	—	(11,500)	—	—	2,631,886	—
Income added to endowment principal	(158,089)	—	—	—	—	(158,089)	158,089	—	—
Appropriated as quasi-endowment	(1,793,361)	(1,776,316)	(1,776,316)	—	—	(17,045)	1,793,361	—	—
For designated purposes	—	(392,417)	(1,384,407)	(264,562)	1,256,552	392,417	—	—	—
Endowment released	18,793	—	—	—	—	18,793	(18,793)	—	—
Net increase in auxiliary activities	—	—	4,272,869	(4,272,869)	—	—	—	—	—
Total transfers among funds—additions (deductions) ..	(4,091,177)	(4,796,267)	(1,503,888)	(4,537,431)	1,245,052	705,090	1,377,583	2,713,594	—
Net increase (decrease) for the period	1,329,712	1,723,809	306,951	—	1,416,858	(394,097)	913,027	(412,962)	3,710,424
Fund balances at June 30, 1975	9,316,811	4,838,530	3,767,375	—	1,071,155	4,478,281	41,420,637	451,146	5,960,316
Fund balances at September 30, 1976	\$10,646,523	6,562,339	4,074,326	—	2,488,013	4,084,184	42,333,664	38,184	9,670,740

See accompanying notes to financial statements.

SMITHSONIAN INSTITUTION—TRUST FUNDS

Notes to Financial Statements

September 30, 1976

1. *Summary of Significant Accounting Policies and General Information*

- a. The statement of changes in fund balances reflects transactions for the fifteen months ended September 30, 1976, as a result of a change in the Institution's fiscal year from June 30 to September 30.
- b. **Accrual Basis**—The financial statements of Smithsonian Institution—Trust Funds (previously designated as Private Funds) (note 2) have been prepared on the accrual basis, except for depreciation of plant fund assets as explained in note 1(i) below, and are in conformity with generally accepted accounting principles included in the American Institute of Certified Public Accountants Audit Guide "Audits of Colleges and Universities."
- c. Current funds include capitalized improvements and equipment used in income-producing activities having a net carrying value of \$1,069,862 and \$597,610 at September 30, 1976 and June 30, 1975, respectively. Current funds used to finance the acquisition of plant assets and for provisions for debt amortization and interest are accounted for as transfers to the plant fund.

Separate sub-fund groups of current unrestricted funds have been reflected in the statement of changes in fund balances for auxiliary activities (representing primarily the revenue and expenditures of the Smithsonian Associates program, including the Smithsonian Magazine, and museum shop sales) and Special Purposes (representing internally segregated funds for certain designated purposes).

- d. **Fund Accounting**—In order to ensure observance of limitations and restrictions placed on the use of the resources available to the Institution, the accounts of the Institution are maintained in accordance with the principles of "fund accounting." This is the procedure by which resources for various purposes are classified for accounting and reporting purposes into funds that are in accordance with activities or objectives specified. Separate accounts are maintained for each fund; however, in the accompanying financial statements, funds that have similar characteristics have been combined into fund groups. Accordingly, all financial transactions have been recorded and reported by fund group.

Within each fund group, fund balances restricted by outside sources are so indicated and are distinguished from unrestricted funds allocated to specific purposes by action of the governing board. Externally restricted funds may only be utilized in accordance with the purposes established by the source of such funds and are in contrast with unrestricted funds over which the governing board retains full control to use in achieving any of its institutional purposes.

Endowment funds are subject to the restrictions of gift instruments requiring in perpetuity that the principal be invested and the income only be

utilized. Also classified as endowment funds are gifts which will allow the expenditure of principal but only under certain specified conditions.

While quasi-endowment funds have been established by the governing board for the same purposes as endowment funds, any portion of such funds may be expended. Restricted quasi-endowment funds represent gifts for restricted purposes where there is no stipulation that the principal be maintained in perpetuity or for a period of time, but the governing board has elected to invest the principal and expend only the income for the purpose stipulated by the donor.

All gains and losses arising from the sale, collection, or other disposition of investments and other noncash assets are accounted for in the fund which owned such assets. Ordinary income derived from investments, receivables, and the like, is accounted for in the fund owning such assets, except for income derived from investments of endowment and similar funds, which income is accounted for in the fund to which it is restricted or, if unrestricted, as revenues in unrestricted current funds.

All other unrestricted revenue is accounted for in the unrestricted current fund. Restricted gifts, grants, endowment income, and other restricted resources are accounted for in the appropriate restricted funds.

- e. Investments are recorded at cost or fair market value at date of acquisition when acquired by gift.
- f. Inventories are carried at lower of average cost or net realizable value.
- g. Income and expenses in respect to the Institution's magazine and associates' activities are deferred and taken into income and expense over the applicable periods and are reported in the activities section of the current unrestricted funds.
- h. The Institution utilizes the "total return" approach to investment management of endowment funds and quasi-endowment funds. Under this approach, the total investment return is considered to include realized and unrealized gains and losses in addition to interest and dividends. In applying this approach, it is the Institution's policy to provide 4½% of the five year average of the market value of each fund (adjusted for gifts and transfers during this period) as being available for current expenditures; however, where the market value of the assets of any endowment fund is less than 110% of the historic dollar value (value of gifts at date of donation) the amount provided is limited to only interest and dividends received.
- i. Capitalized improvements and equipment used in income-producing activities purchased with Trust Funds are capitalized in the current unrestricted fund at cost (see note 1(c)), and are depreciated on a straight-line basis over their estimated useful lives of five to ten years. Depreciation expense of \$186,660 for 1976 is reflected in the expenditures of the current funds.

Real estate (land and buildings) are recorded in the plant fund at cost, to the extent that restricted or unrestricted funds were expended therefor, or appraised value at date of gift, except for gifts of certain islands in Chesapeake Bay and the Carnegie Mansion, which have been recorded at nominal values. Depreciation on buildings is not recorded.

All the other land, buildings, fixtures and equipment (principally acquired with Federal funds), works of art, living or other specimens are not reflected in the accompanying financial statements.

- j. The agency funds group consists of funds held by the Institution as custodian or fiscal agent for others.
- k. Pension costs are funded as accrued.
- l. The Institution has a number of contracts with the U. S. Government, which primarily provide for cost reimbursement to the Institution. Contract revenues are recognized as expenditures are incurred.

2. *Related Activities*

The Trust Funds reflect the receipt and expenditure of funds obtained from private sources, from Federal grants and contracts and from certain activities related to the operations of the Institution.

Federal appropriations, which are not reflected in the accompanying financial statements, provide major support for the operations and administration of the educational and research programs of the Institution's many museums, art galleries and other bureaus, as well as for the maintenance and construction of related buildings and facilities. In addition, land, buildings and other assets acquired with Federal funds are not reflected in the accompanying financial statements.

The following Federal appropriations were received by the Institution for the fifteen months ended September 30, 1976 and the twelve months ended June 30, 1975.

	<u>1976</u>	<u>1975</u>
Operating funds	\$106,654,000	72,511,000
Special foreign currency program.....	500,000	2,000,000
Construction funds	<u>13,922,000</u>	<u>17,910,000</u>
	<u>\$121,076,000</u>	<u>92,421,000</u>

The Institution provides fiscal and administrative services to certain separately incorporated organizations on which certain officials of the Institution serve on the governing boards. The amounts paid to the Institution by these organizations for the aforementioned services, together with rent for Institution facilities occupied, etc., totaled approximately \$466,000 for the fifteen months ended September 30, 1976. The following summarizes the approximate expenditures of these organizations for the fifteen months ended September 30, 1976, as reflected in their individual financial statements and which are not included in the accompanying financial statements of the Institution:

Smithsonian Research Foundation	\$2,500,000
Smithsonian Science Information Exchange .	2,900,000
Reading is Fundamental, Inc.	650,000
Center for Natural Areas, Inc.	<u>420,000</u>

3. Investments

Quoted market values and carrying values of investments (all marketable securities) of the funds indicated were as follows:

	<i>September 30, 1976</i>		<i>June 30, 1975</i>	
	<i>Carrying value</i>	<i>Market value</i>	<i>Carrying value</i>	<i>Market value</i>
Current funds	\$ 8,149,723	8,093,625	10,149,875	10,083,444
Endowment and similar funds	40,296,458	42,667,967	40,015,177	40,532,248
Total investments	<u>\$48,446,181</u>	<u>50,761,592</u>	<u>50,165,052</u>	<u>50,615,692</u>

Total investment performance is summarized below:

	<i>Net Gains (Losses)</i>		
	<i>Current funds</i>	<i>Endowment and similar funds</i>	<i>Total</i>
Unrealized gains (losses):			
September 30, 1976	\$(56,098)	2,371,509	2,315,411
June 30, 1975	(66,431)	517,071	450,640
Unrealized net gains for period	<u>10,333</u>	<u>1,854,438</u>	<u>1,864,771</u>
Realized net gain (losses) for period .	<u>2,303</u>	<u>(533,929)</u>	<u>(531,626)</u>
Total net gains for period	<u>\$ 12,636</u>	<u>1,320,509</u>	<u>1,333,145</u>

Substantially all of the investments of the endowment and similar funds are pooled on a market value basis (consolidated fund) with each individual fund subscribing to or disposing of units on the basis of the value per unit at market value at the beginning of the calendar quarter within which the transaction takes place. Of the total units each having a market value of \$103.69 (\$102.61 in 1975), 335,954 units were owned by endowment, and 79,520 units by quasi-endowment at September 30, 1976.

The following tabulation summarizes the changes in the pooled investments during the fifteen months ended September 30, 1976:

	<i>Carrying value</i>	<i>Market</i>	<i>Market value per unit</i>
September 30, 1976	\$40,720,429	43,079,172	103.69
June 30, 1975	<u>40,063,092</u>	<u>40,569,918</u>	<u>102.61</u>
Increase	<u>\$ 657,337</u>	<u>2,509,254</u>	<u>1.08</u>

4. Mortgage Notes Payable

The mortgage notes payable are secured by first deeds of trust on property acquired in connection with the Chesapeake Bay Center. The details of the mortgage notes payable are as follows:

	<u>1976</u>	<u>1975</u>
Mortgage note, payable in semiannual installments of \$13,300, plus interest at the prevailing prime rate at the due date of the installment payment but not less than 8%, due July 1, 1980	\$106,400	146,300
6% mortgage note payable, due in monthly installments of \$451 including interest, due November 1, 1989	28,422	33,418
6% mortgage note, payable in semiannual installments of \$10,000, plus interest, due November 7, 1979	70,000	90,000
	<u>\$204,822</u>	<u>269,718</u>

5. *Pension Plan*

The Institution has a contributory pension plan providing for the purchase of retirement annuity contracts for those employees meeting certain age and length of service requirements who elect to be covered under the plan. Under terms of the plan, the Institution contributes the amount necessary to bring the total contribution to 12% of the participants' compensation subject to social security taxes and to 17% of the participants' compensation in excess of that amount. The total pension expense for the fifteen months ended September 30, 1976 was \$1,404,788.

6. *Income Taxes*

The Institution has been recognized as exempt from income taxes as a nonprofit organization described in Section 501(c)(3) of the Internal Revenue Code. It is the opinion of the Institution that it is also exempt from taxation as an instrumentality of the United States as described in Section 501(c)(1) of the Code. Recognition of this dual status will be sought from the Internal Revenue Service. Should the Institution's position not prevail, income taxes in a substantial amount might be imposed on certain income of the Institution, under provisions of the Internal Revenue Code dealing with unrelated business income as defined therein.

SMITHSONIAN INSTITUTION LIBRARIES



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